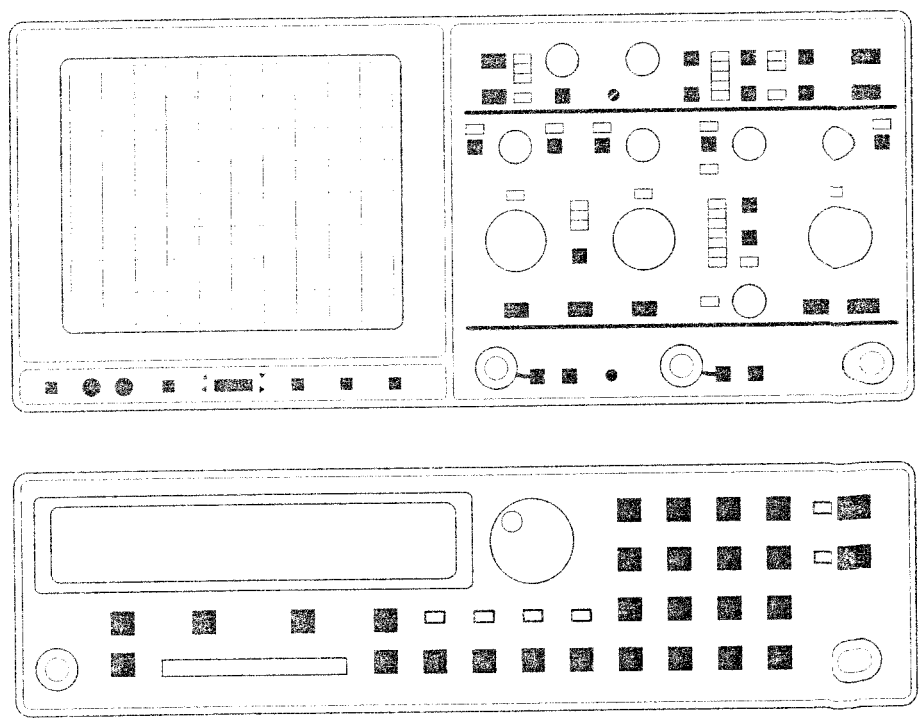
HAMEG®
Instruments

HAME -00093

MANUAL



93

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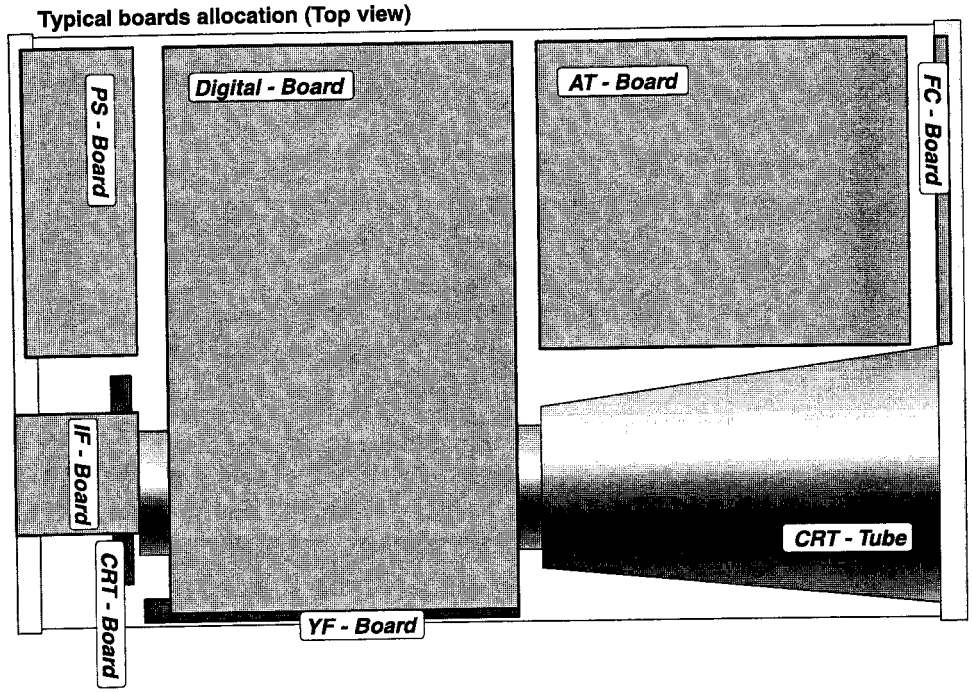
Circuit Diagrams

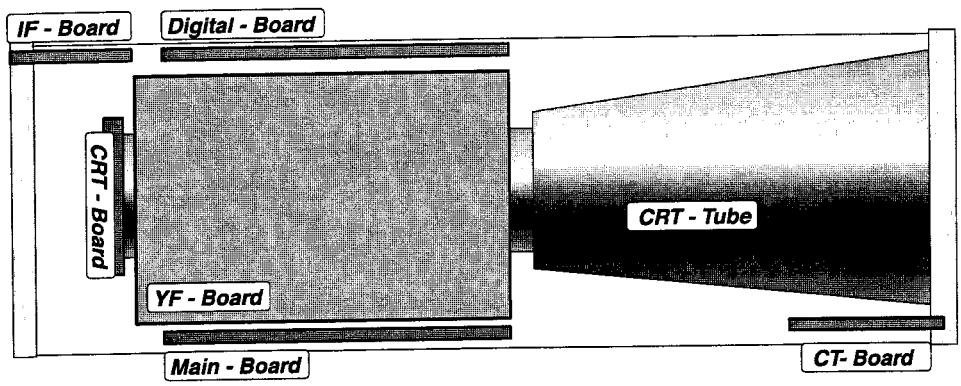
HM404

St:010998/goRR

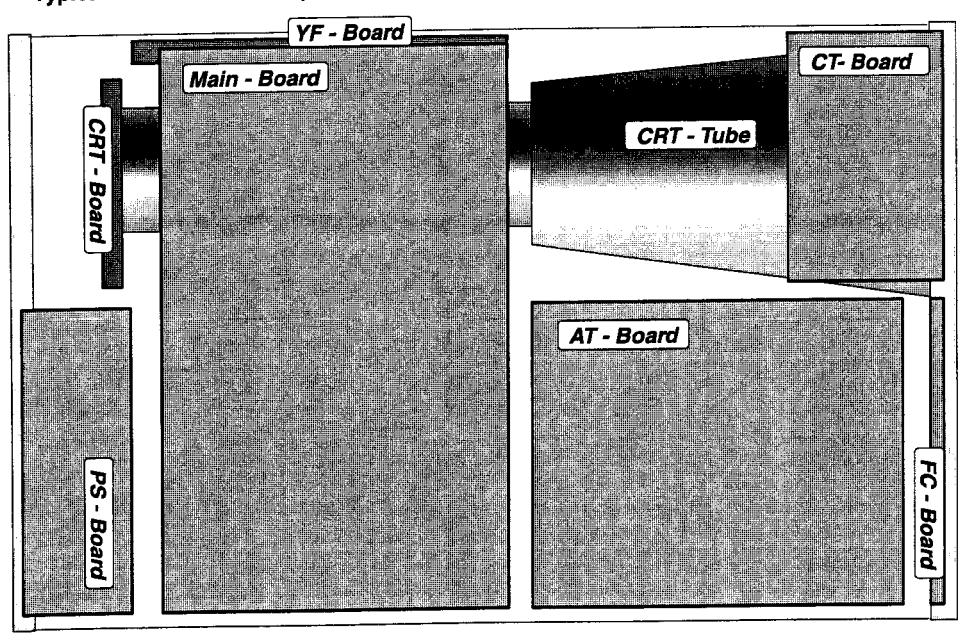
Typical boards allocation (Top view)

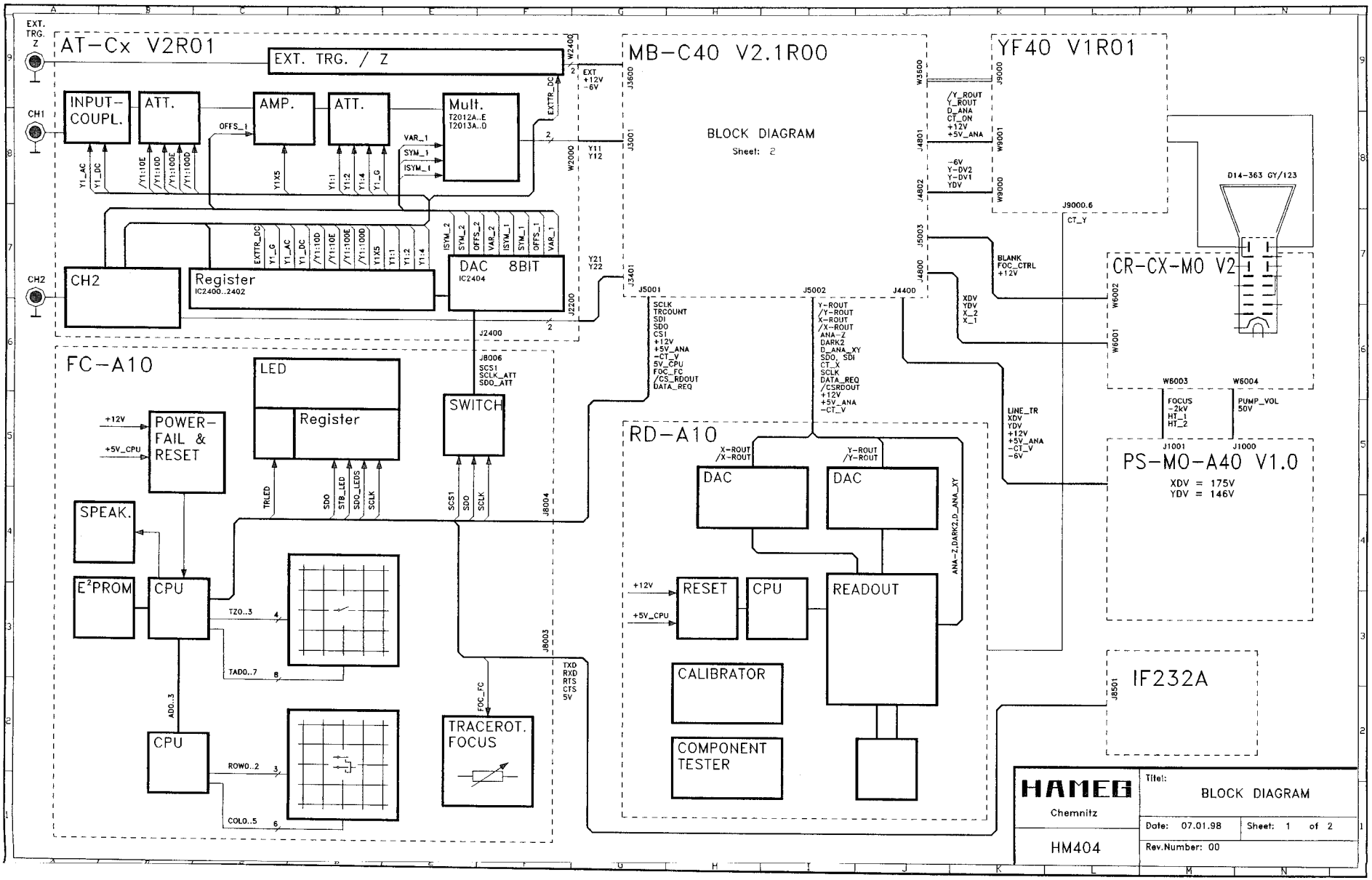


Typical boards allocation (Back side)

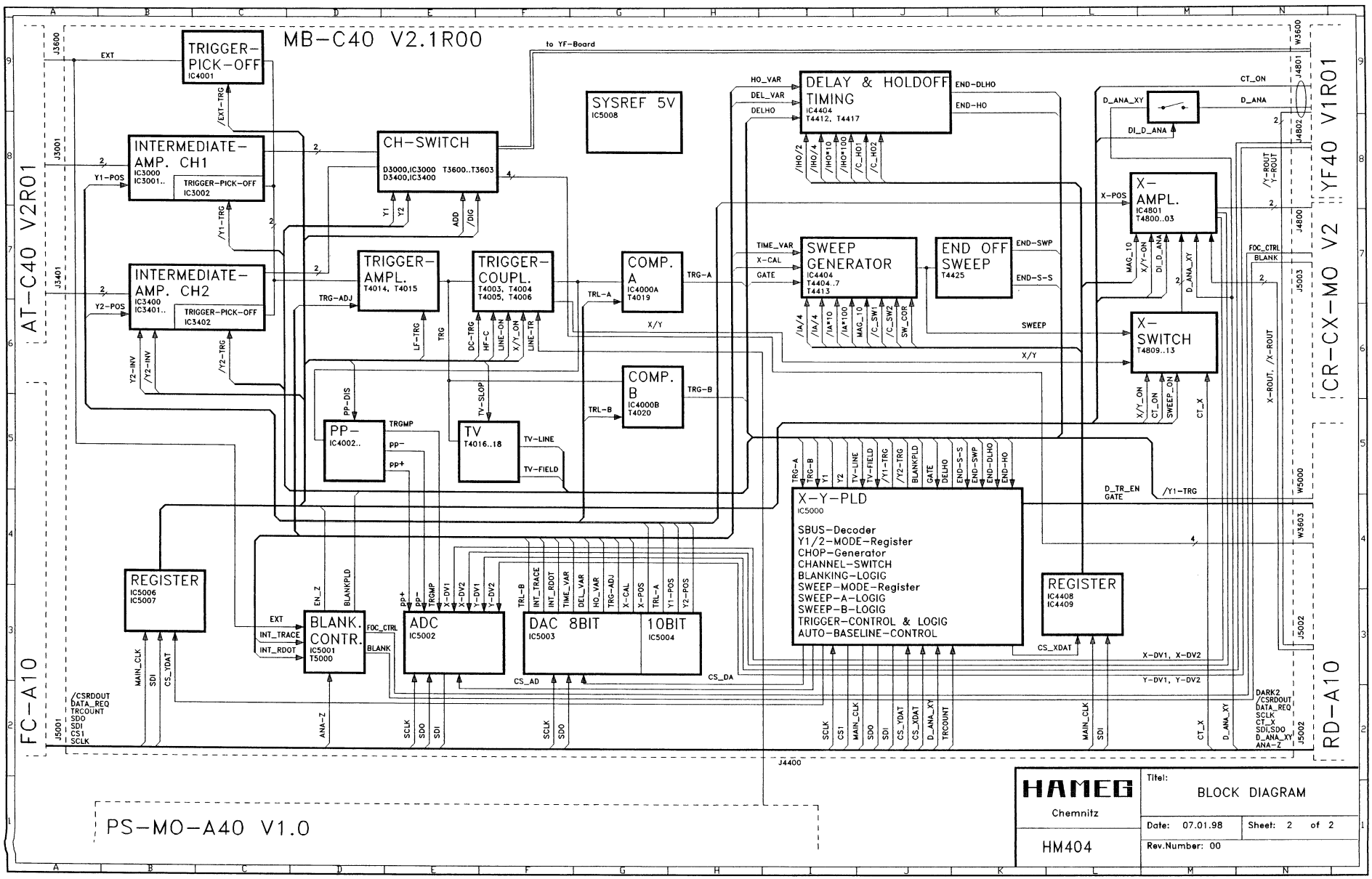


Typical boards allocation (Bottom view)

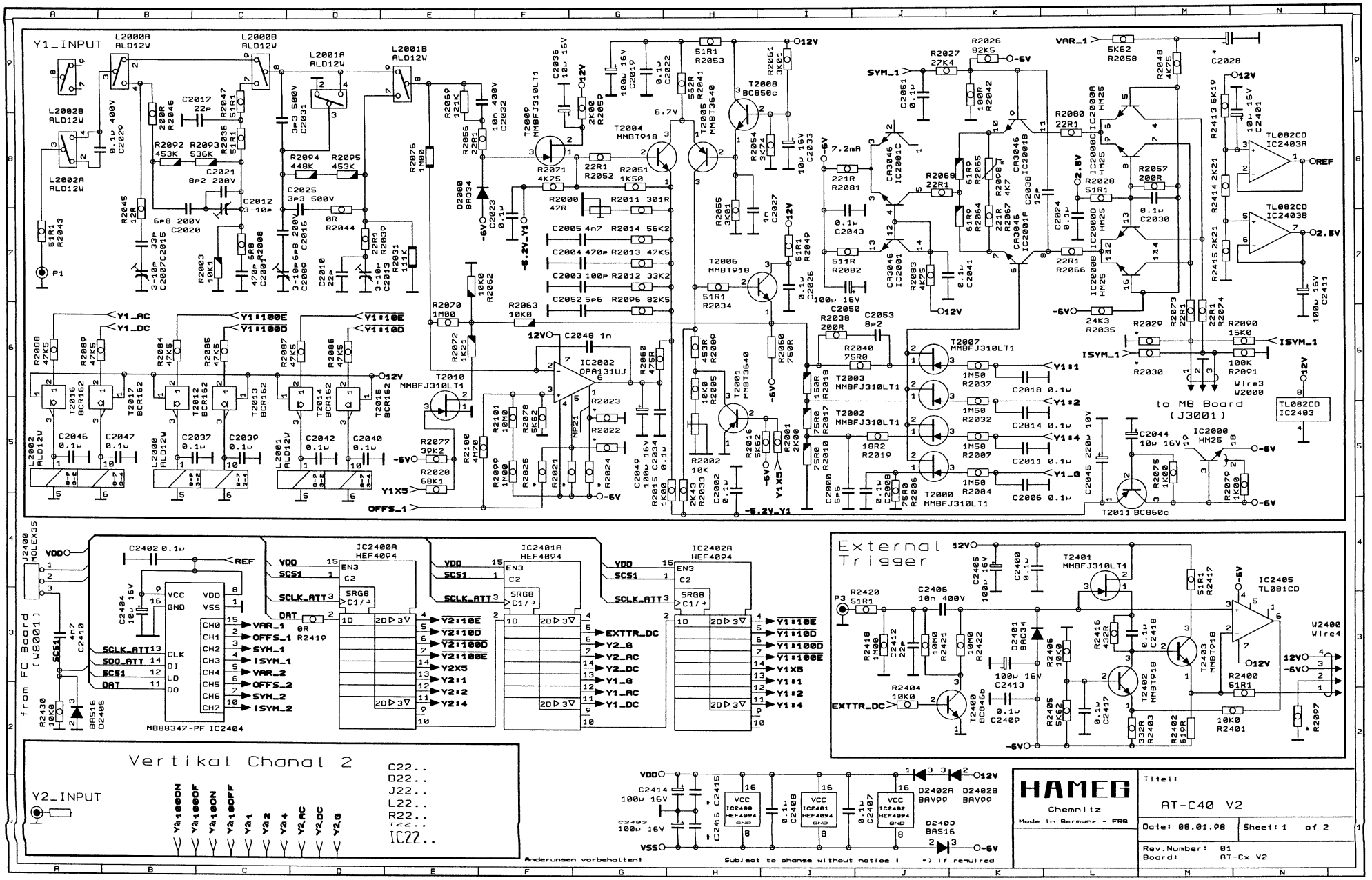


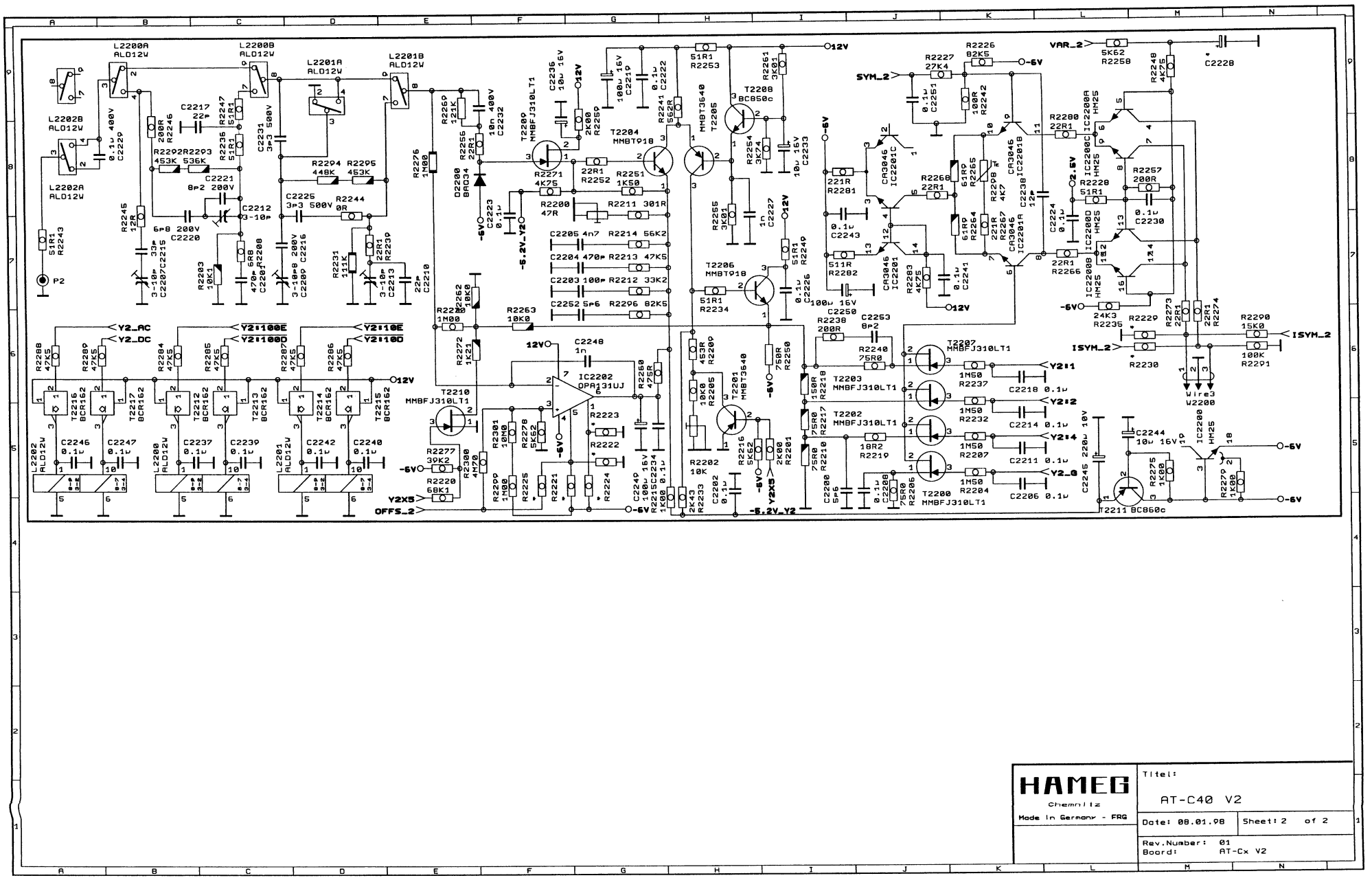


Subject to change without notice


MB-C40 V2.1R00
AT-C40 V2R01
FC-A10
CR-CX-MO V2 YF40 V1R01
RD-A10
PS-MO-A40 V1.0
TRIGGER-PICK-OFF IC4001
INTERMEDIATE-AMP. CH1 IC3000 IC3001.. TRIGGER-PICK-OFF IC3002
INTERMEDIATE-AMP. CH2 IC3400 IC3401.. TRIGGER-PICK-OFF IC3402
CH-SWITCH D3000,IC3000 T3600..T3603 D3400,IC3400
SYSREF 5V IC5008
TRIGGER-AMPL. T4014, T4015
TRIGGER-COUPL. T4003, T4004 T4005, T4006
COMP. A IC4000A T4019
COMP. B IC4000B T4020
DELAY & HOLDOFF TIMING IC4404 T4412, T4417
SWEEP GENERATOR IC4404 T4404..7 T4413
END OFF SWEEP T4425
X-AMPL. IC4801 T4800..03
X-SWITCH T4809..13
PP- IC4002..
TV T4016..18
X-Y-PLD IC5000
SBUS-Decoder
Y1/2-MODE-Register
CHOP-Generator
CHANNEL-SWITCH
BLANKING-LOGIG
SWEEP-MODE-Register
SWEEP-A-LOGIG
SWEEP-B-LOGIG
TRIGGER-CONTROL & LOGIG
AUTO-BASELINE-CONTROL
REGISTER IC5006 IC5007
REGISTER IC4408 IC4409
BLANK. CONTR. IC5001 T5000
ADC IC5002
DAC 8BIT IC5003
10BIT IC5004
HAMEG
Chemnitz
HM404
Titel: BLOCK DIAGRAM
Date: 07.01.98
Sheet: 2 of 2
Rev.Number: 00

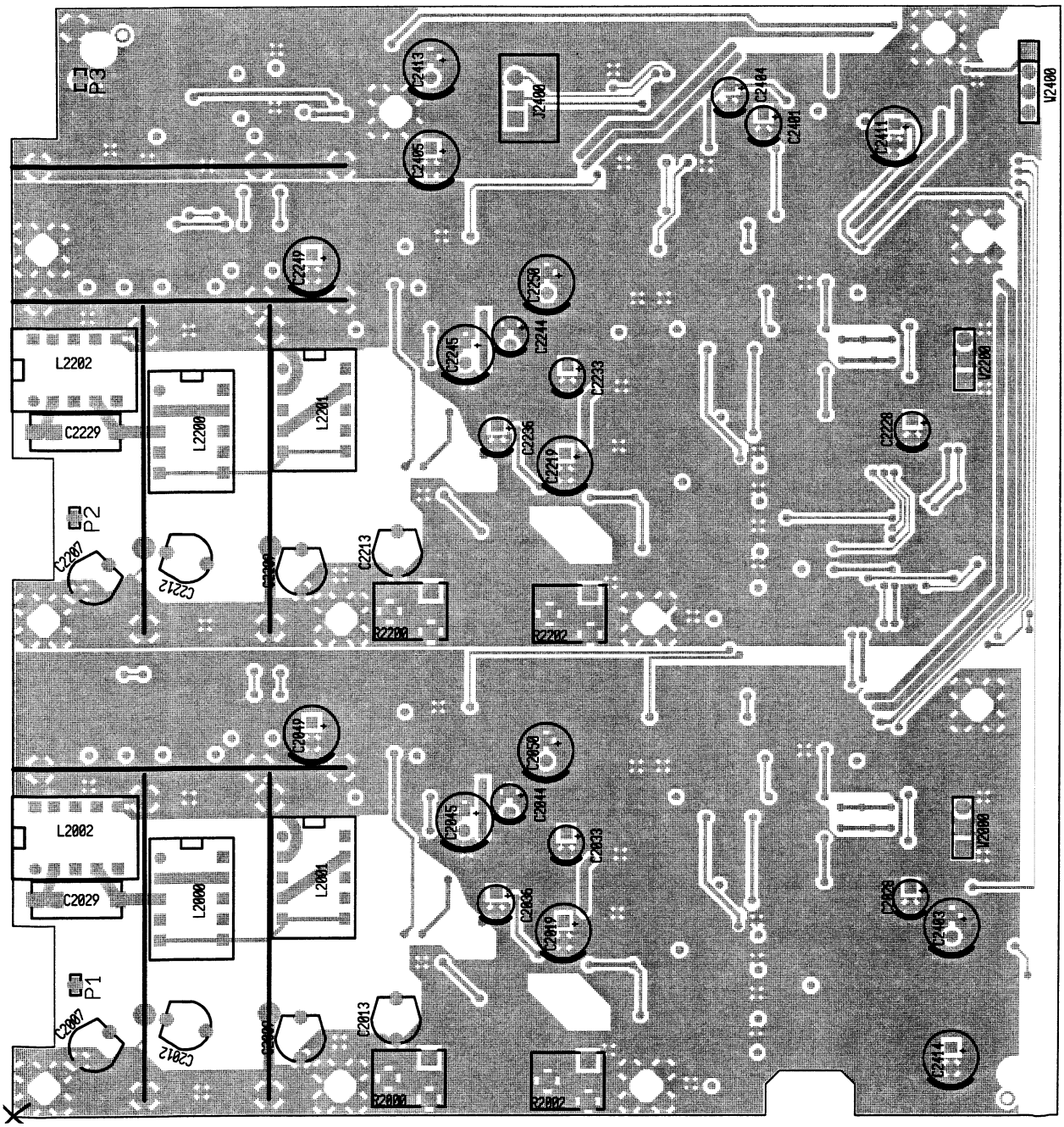
AT - Board Diagram





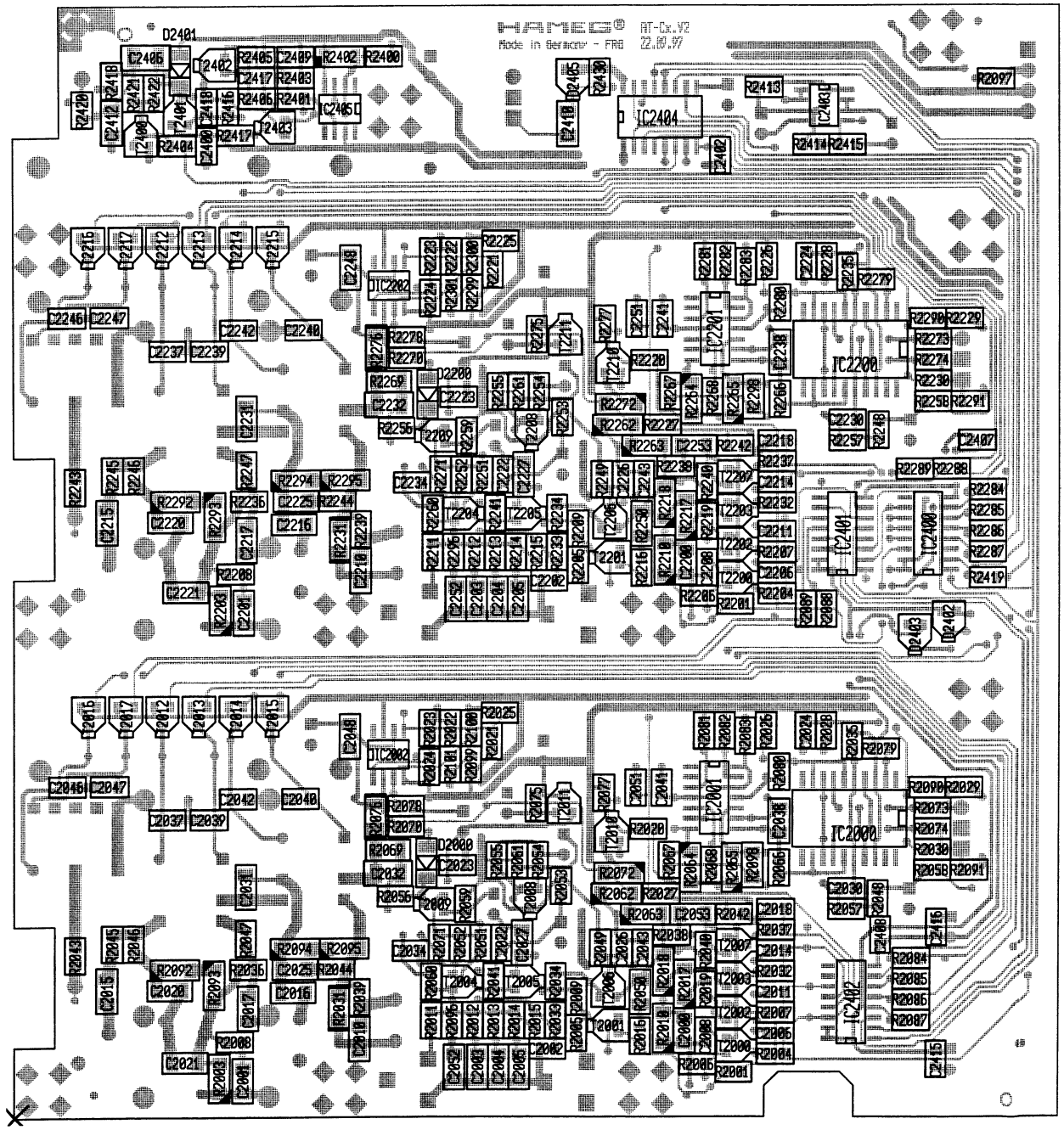
Subject to change without notice

AT - Board Top side

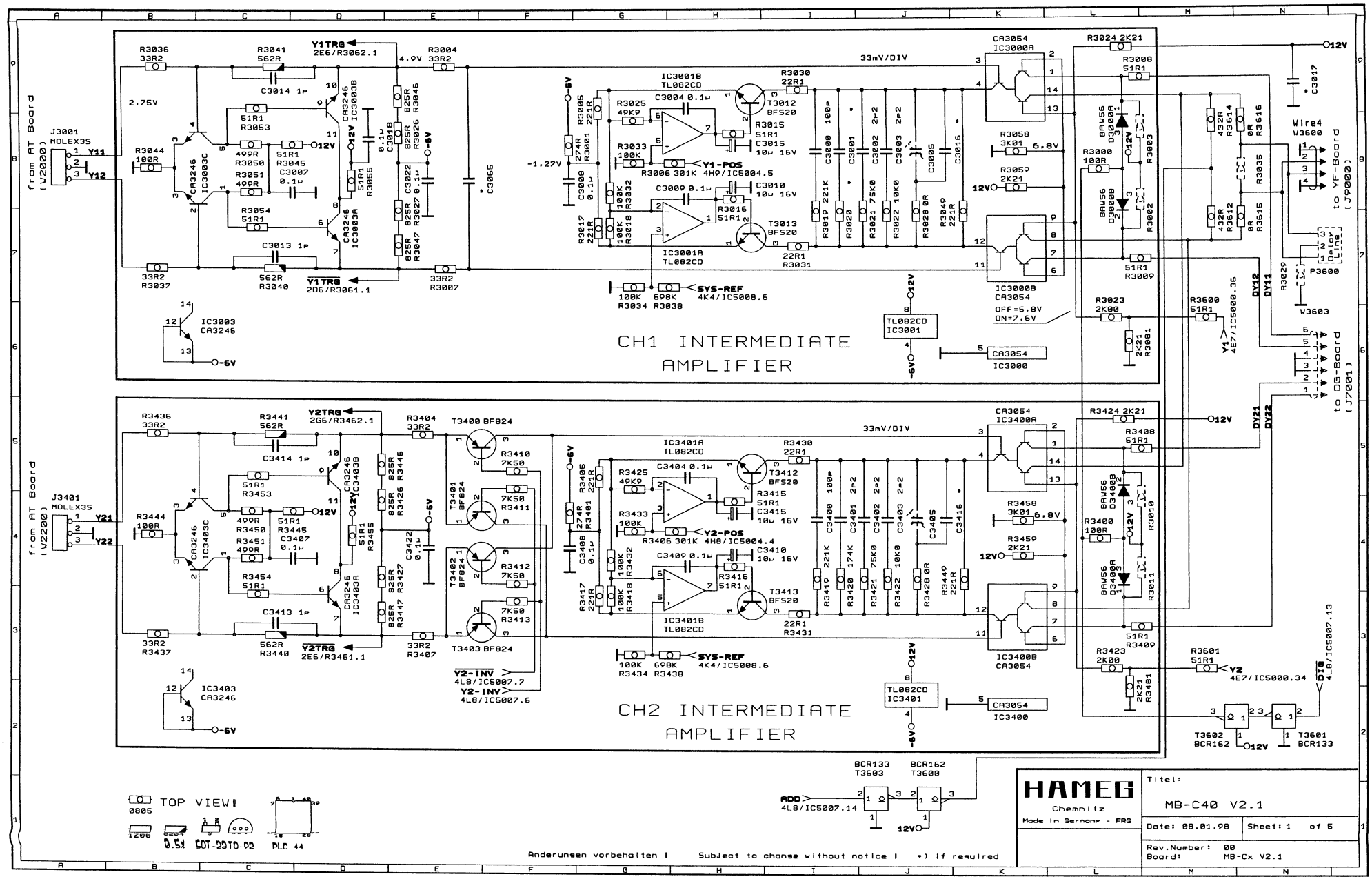


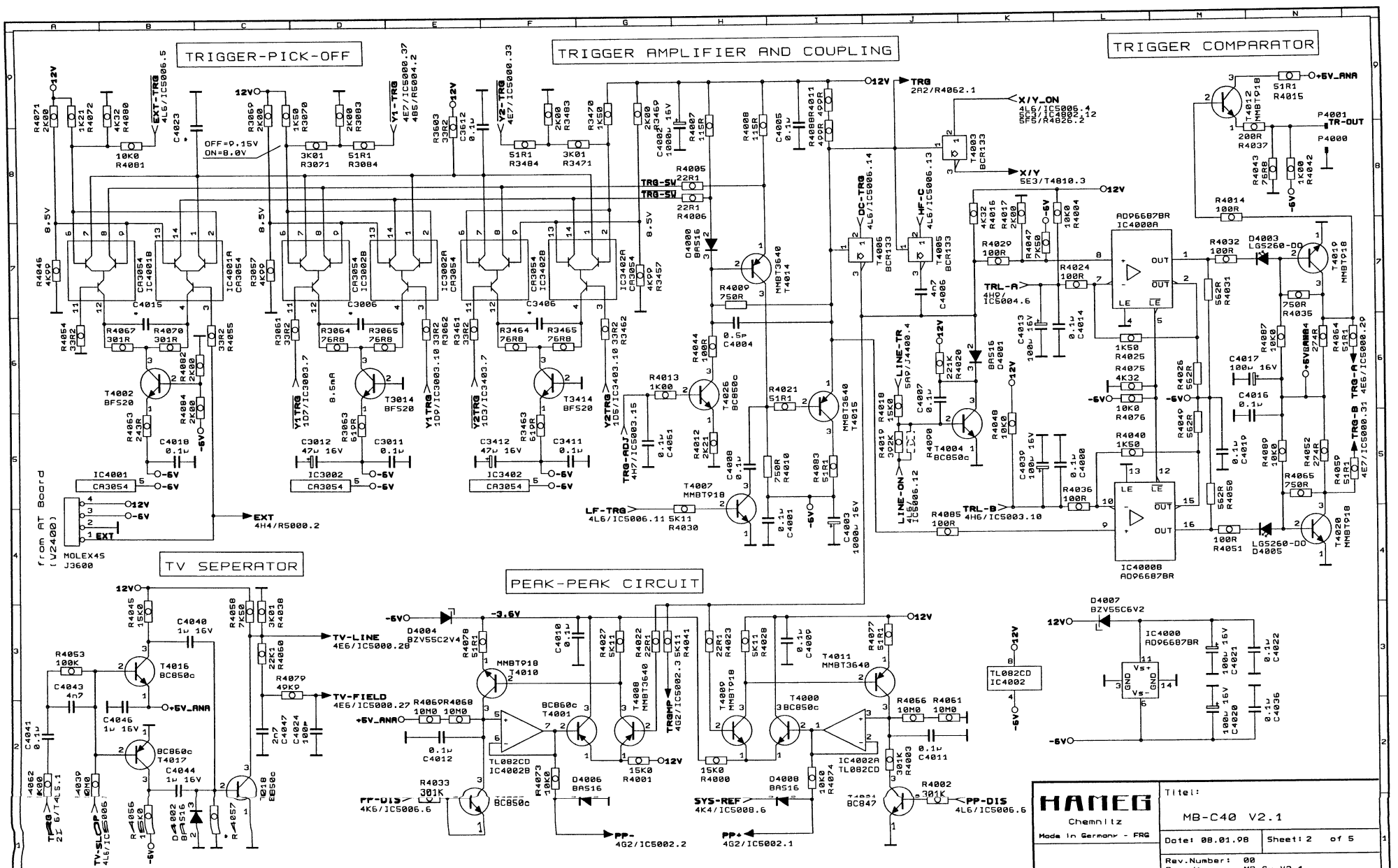
Subject to change without notice

AT - Board Rear side



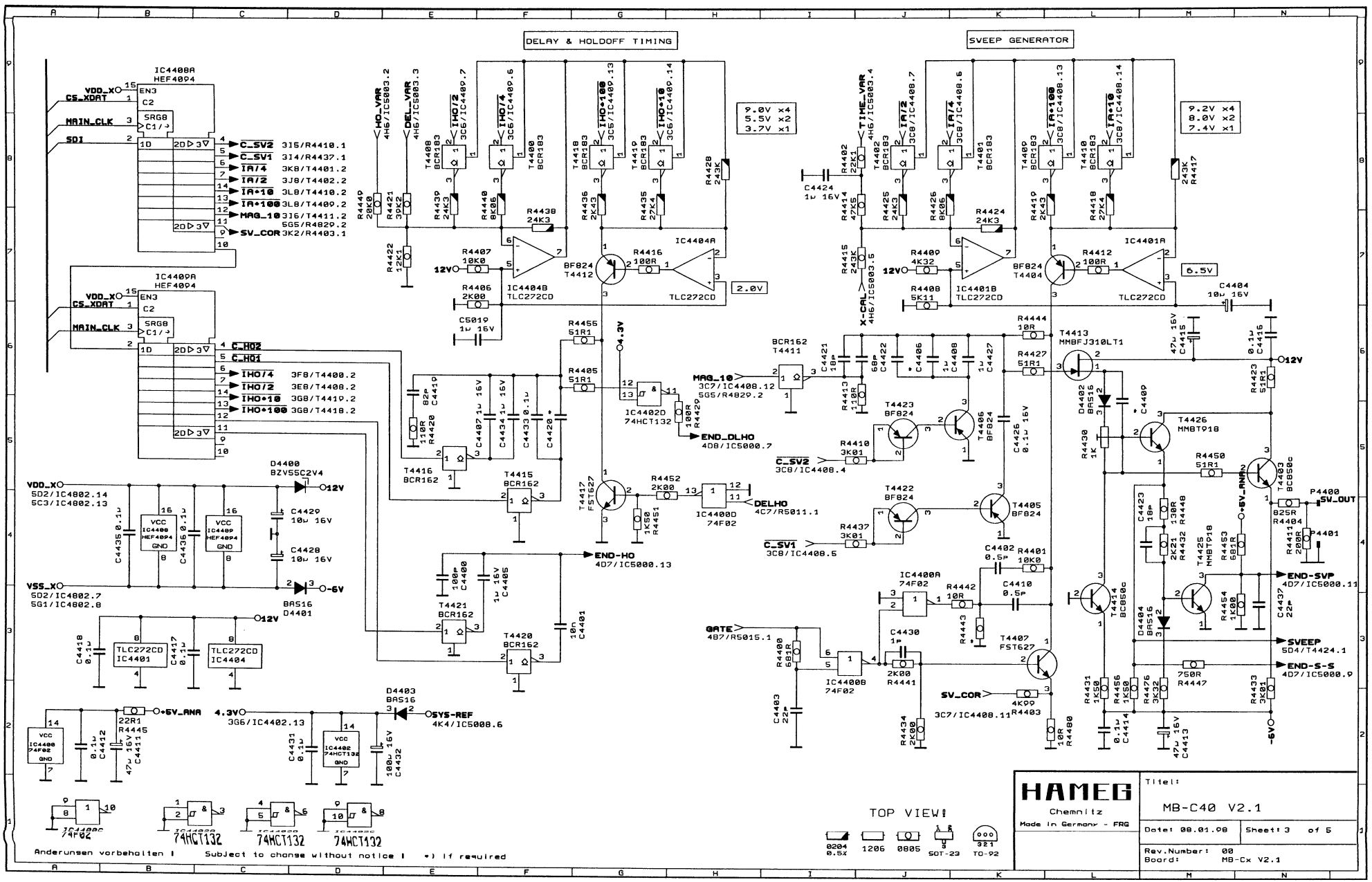
MB - Board Diagram

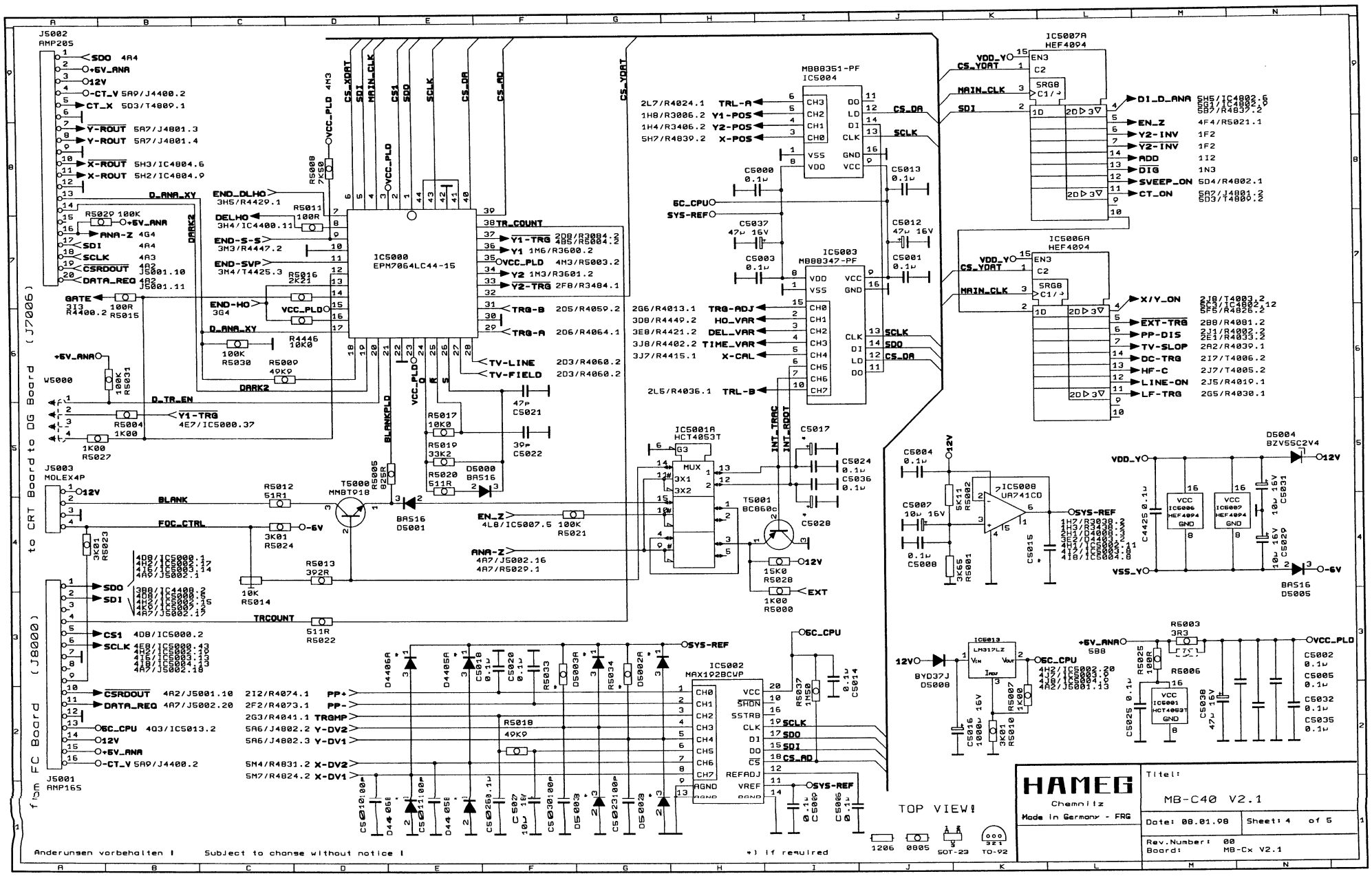




MB - Board Diagram

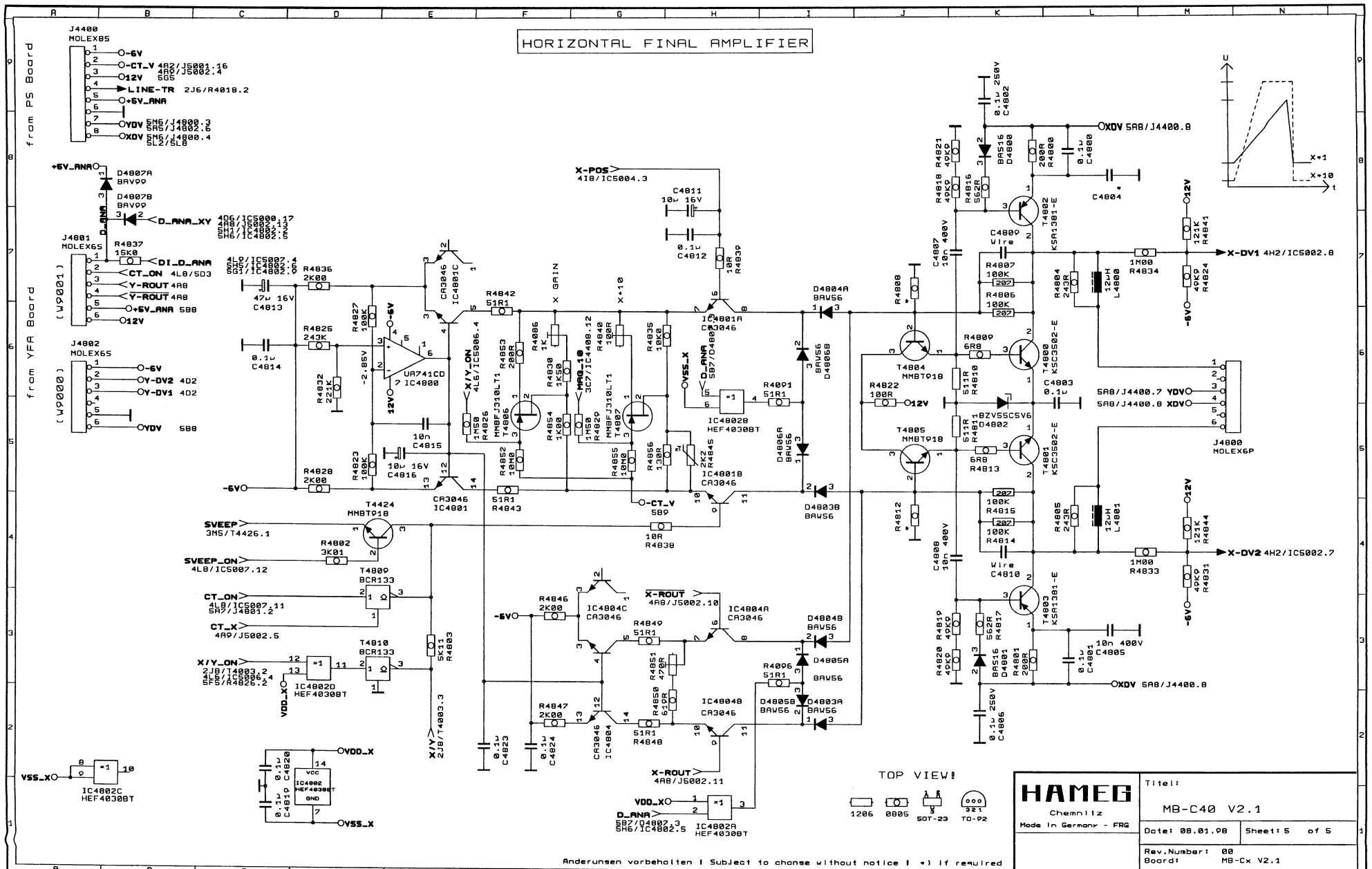
MB - Board Diagram

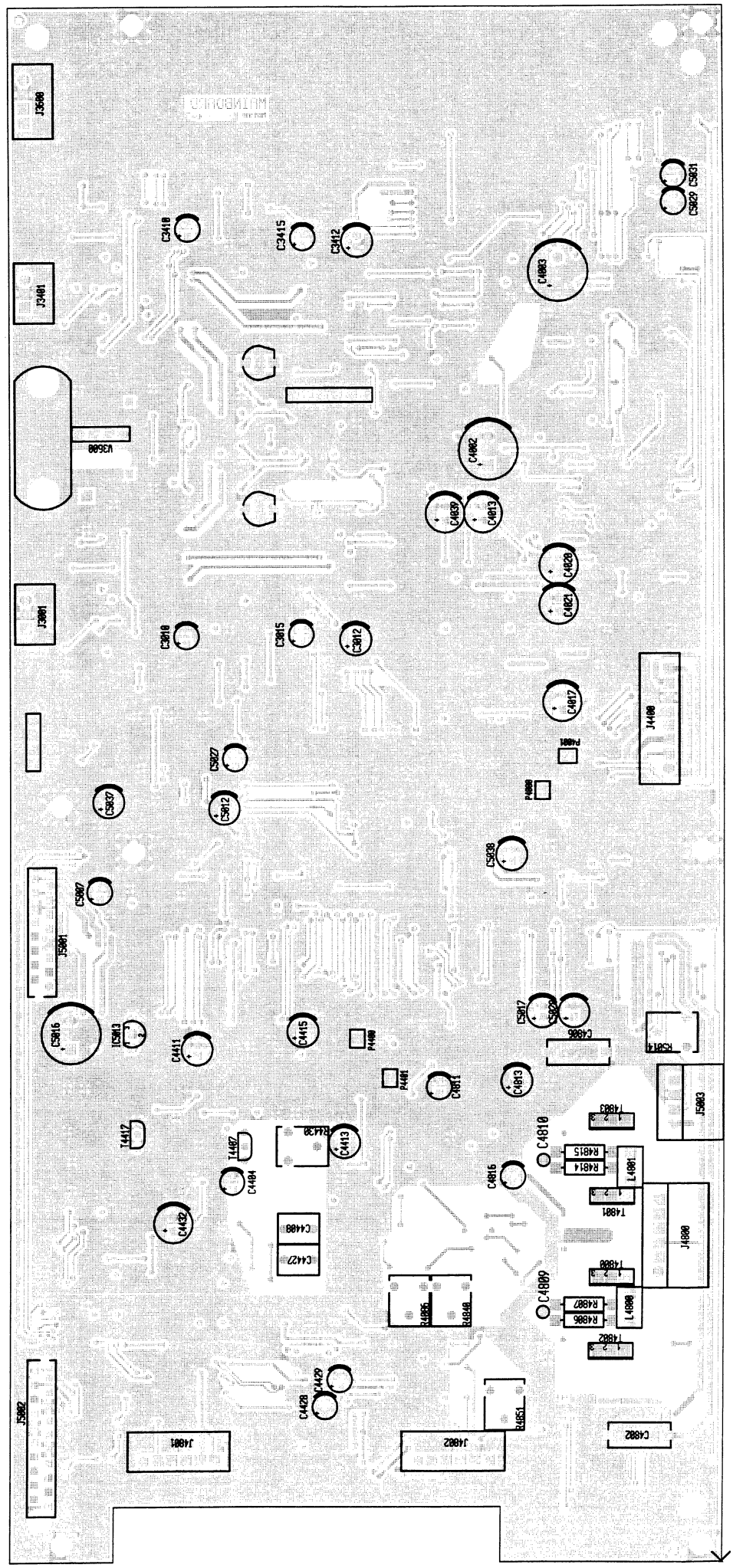




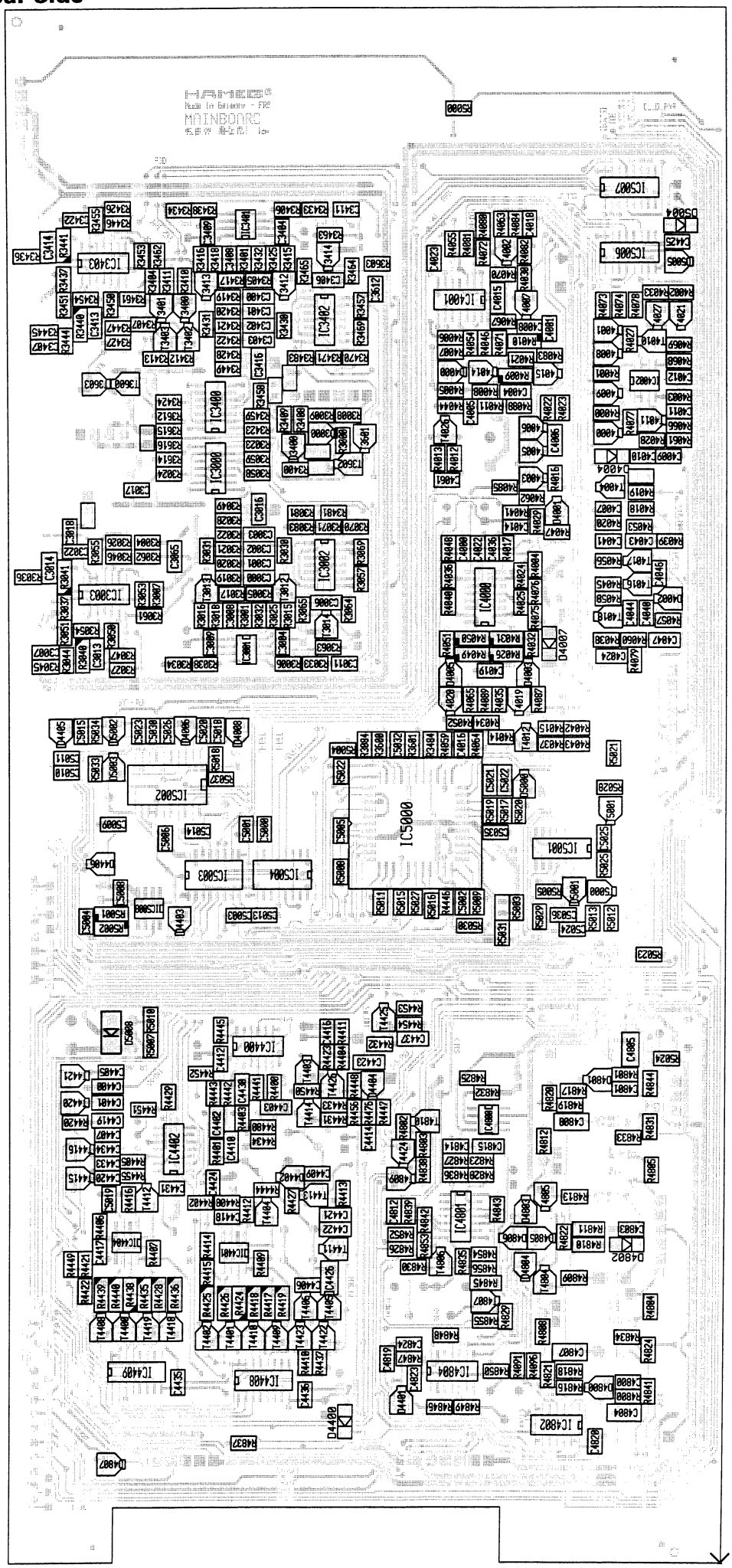
from FC Board (J8000) to CRT Board to DG Board (J7006)

MB - Board Diagram


HORIZONTAL FINAL AMPLIFIER
from PS Board
from YFA Board
J4400 MOLEX8S
-6V
-CT_V 4A2/J5001.15 4A9/J5002.4 SG5
12V
LINE-TR 2J6/R4018.2
+5V_ANA
YDV 5M6/J4800.3 5M5/J4802.6
XDV 5M6/J4800.4 5L2/5L8
+5V_ANA
D4807A BAV99
D4807B BAV99
D_ANA
D_ANA_XY 4D6/IC5000.17 4A8/J5002.13 5H1/IC4802.5 5H6/IC4802.5
J4801 MOLEX6S (W9001)
R4837 15K0
DI_D_ANA
CT_ON 4L8/5D3
Y-ROUT 4A8
Y-ROUT 4A8
+5V_ANA 5B8
12V
J4802 MOLEX6S (W9000)
-6V
Y-DV2 4D2
Y-DV1 4D2
YDV 5B8
X-POS 4I8/IC5004.3
C4811 10µ 16V
0.1µ C4812
10R R4839
X GAIN
X-10
R4842 51R1
R4836 2K00
47µ 16V C4813
R4825 243K
0.1µ C4814
R4827 100K
R4832 221K
-2.85V
UA741CD IC4800
12V
10n C4815
R4823 100K
10µ 16V C4816
R4828 2K00
-6V
CA3046 IC4801C
CA3046 IC4801
51R1 R4843
T4424 MMBT918
SVEEP 3M5/T4426.1
R4802 3K01
SVEEP_ON 4L8/IC5007.12
T4809 BCR133
CT_ON 4L8/IC5007.11 5A7/J4801.2
CT_X 4A9/J5002.5
T4810 BCR133
X/Y_ON 2J8/T4003.2 4L8/IC5006.4 5F5/R4826.2
IC4802D HEF4030BT
VDD_X
5K11 R4803
X/Y 2J8/T4003.3
VSS_X
IC4802C HEF4030BT
C4820 0.1µ
C4819 0.1µ
IC4802 HEF4030BT
VCC
GND
VDD_X
VSS_X
X/Y_ON 4L6/IC5006.4
MMBFJ310LT1 T4806
R4826 1M50
R4853 200R
R4852 10M0
R4854 1K00
R4830 1K50
MMBFJ310LT1 T4807
R4820 1M50
R4840 100R
R4855 100R
R4856 130R
R4845 2K2
R4835 10K0
R4086 1K
IC4801B CA3046
IC4801A CA3046
VSS_X
D_ANA 5B7/D4800.3
IC4802B HEF4030BT
R4091 51R1
D4804A BAV56
D4806A BAV56
D4806B BAV56
D4803B BAV56
-CT_V 5B9
10R R4838
X-ROUT 4A8/J5002.10
IC4804C CA3046
IC4804A CA3046
R4846 2K00
R4849 51R1
R4851 470R
R4850 610R
R4847 2K00
51R1 R4848
IC4804B CA3046
CA3046 IC4804
X-ROUT 4A8/J5002.11
VDD_X
D_ANA 5B7/D4802.3 5H6/IC4802.5
IC4802A HEF4030BT
0.1µ C4823
0.1µ C4824
D4804B BAV56
D4805A BAV56
R4096 51R1
D4805B BAV56
D4803A BAV56
0.1µ 250V C4806
C4802 0.1µ 250V
BAS16 D4800
200R R4800
0.1µ C4800
XDV 5A8/J4400.8
R4818 40K9
R4821 40K9
R4816 562R
C4804
T4802 KSA1381-E
C4809 Wire
C4807 10n 400V
R4807 100K
R4805 100K
1M00 R4834
R4804 243R
12µH L4800
121K R4841
X-DV1 4H2/IC5002.8
49K9 R4824
-6V
12V
R4808
T4804 MMBT918
R4809 6R8
T4800 KSC3502-E
R4822 100R
12V
R4810 511R
BZV55C5V6 D4802
C4803 0.1µ
5A8/J4400.7 YDV
5A8/J4400.8 XDV
R4811 511R
T4805 MMBT918
6R8 R4813
T4801 KSC3502-E
J4800 MOLEX6P
R4812
R4815 100K
R4814 100K
C4808 10n 400V
Wire C4810
R4805 243R
12µH L4801
121K R4844
X-DV2 4H2/IC5002.7
1M00 R4833
49K9 R4831
-6V
12V
R4819 40K9
R4820 40K9
562R R4817
T4803 KSA1381-E
10n 400V C4805
0.1µ C4801
BAS16 D4801
R4801 200R
XDV 5A8/J4400.8
0.1µ 250V C4806
U
X*1
X*10
t
TOP VIEW!
1206
0805
SOT-23
TO-92
Änderungen vorbehalten ! Subject to change without notice ! *) if required
HAMEG
Chemnitz
Made in Germany - FRG
Titel: MB-C40 V2.1
Date: 08.01.98
Sheet: 5 of 5
Rev.Number: 00
Board: MB-Cx V2.1

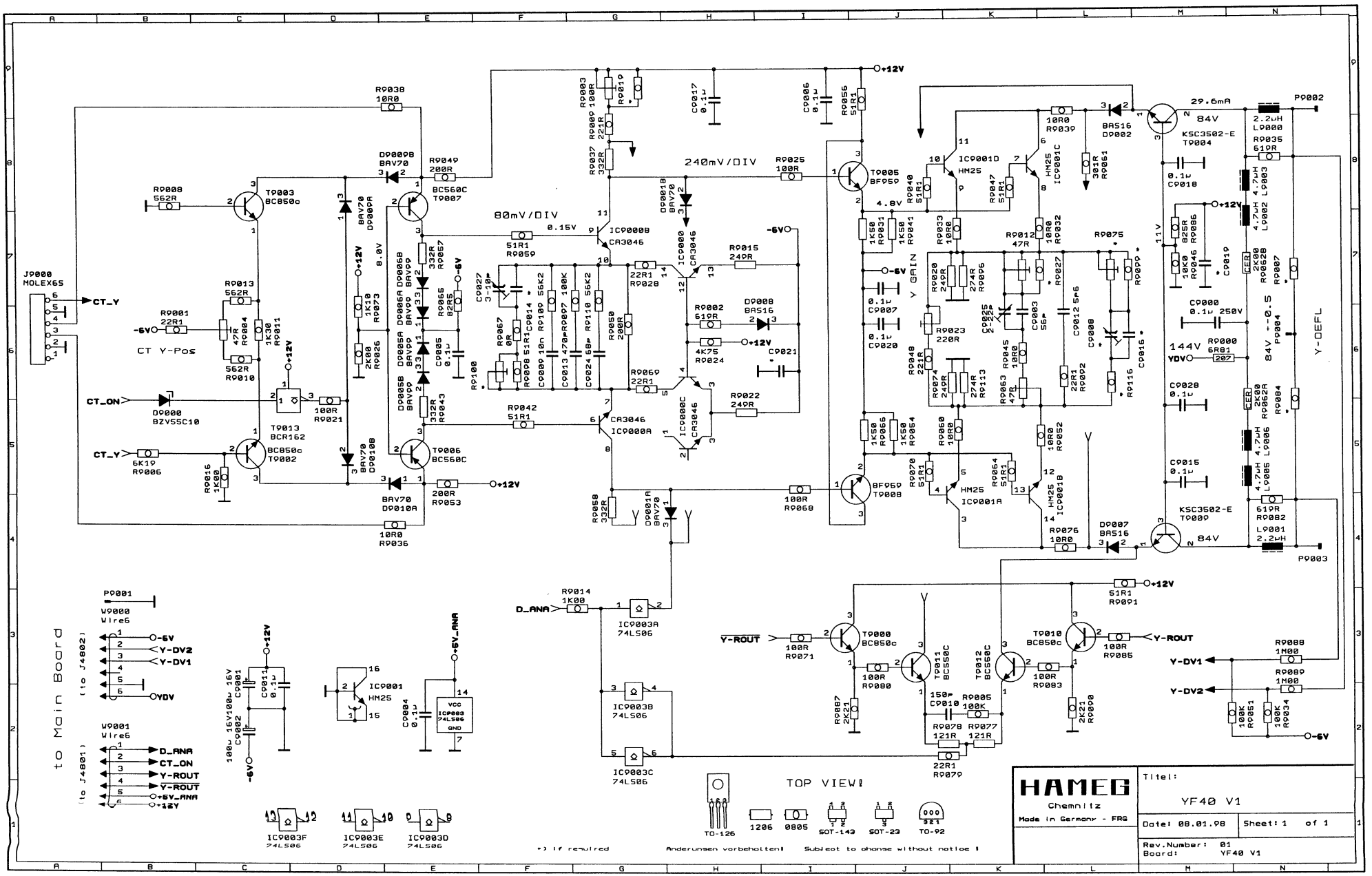

J3500
J3401
J3001
V3500
C3410
C3415
C3412
C4003
C5029
C5031
C4002
C4039
C4013
C4020
C4021
C3010
C3015
C3012
C4017
J4400
P4001
C5027
C5012
C5037
P4000
C5038
C5007
J5001
C5016
C5013
C4411
C4415
P4400
P4401
C4011
C4013
C5017
C5020
C4006
C5014
J5003
T4412
T4407
R4430
C4413
C4404
C4432
C4408
C4427
C4010
R4815
R4814
L4001
T4803
T4801
J4800
C4015
C4009
R4807
R4806
L4000
T4808
T4802
R4826
R4840
C4428
C4429
R4851
J4802
J4801
J5002
C4802

MB - Board Rear side

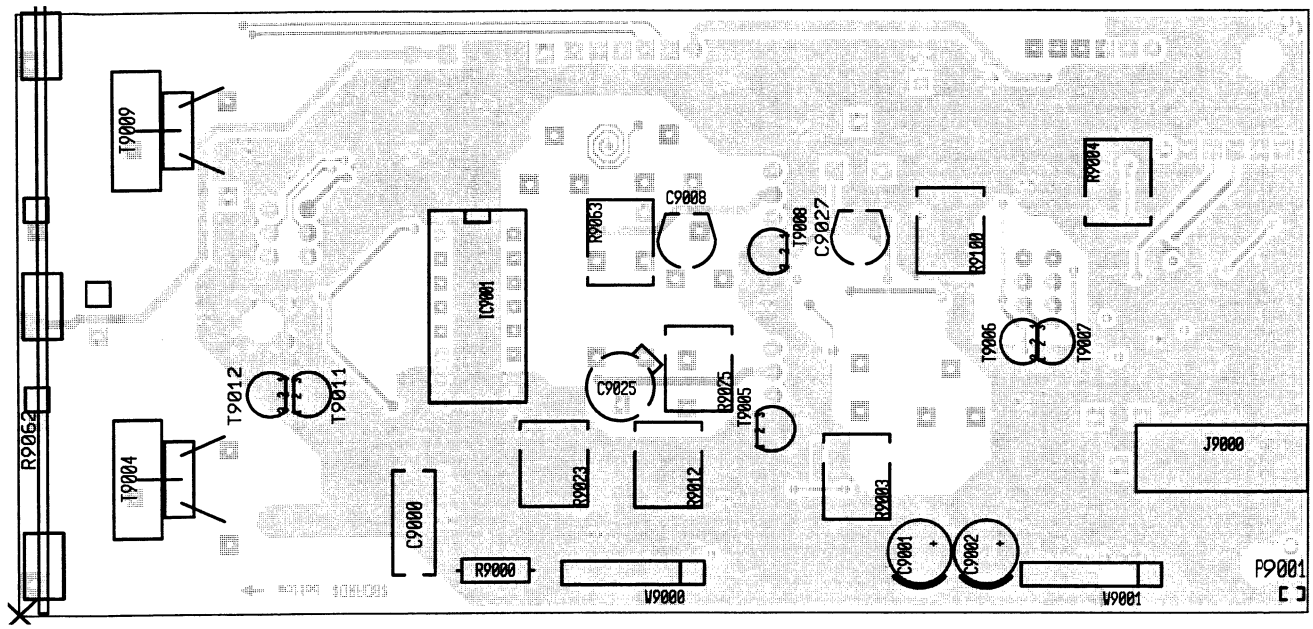


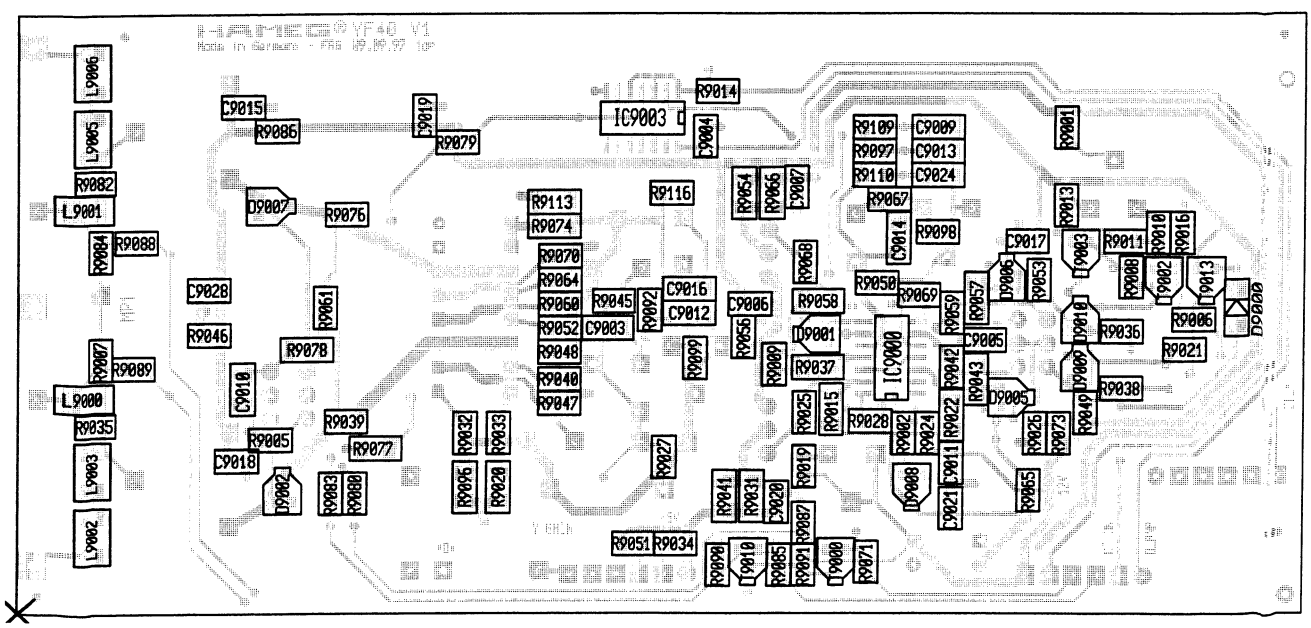
Subject to change without notice

YF - Board Diagram

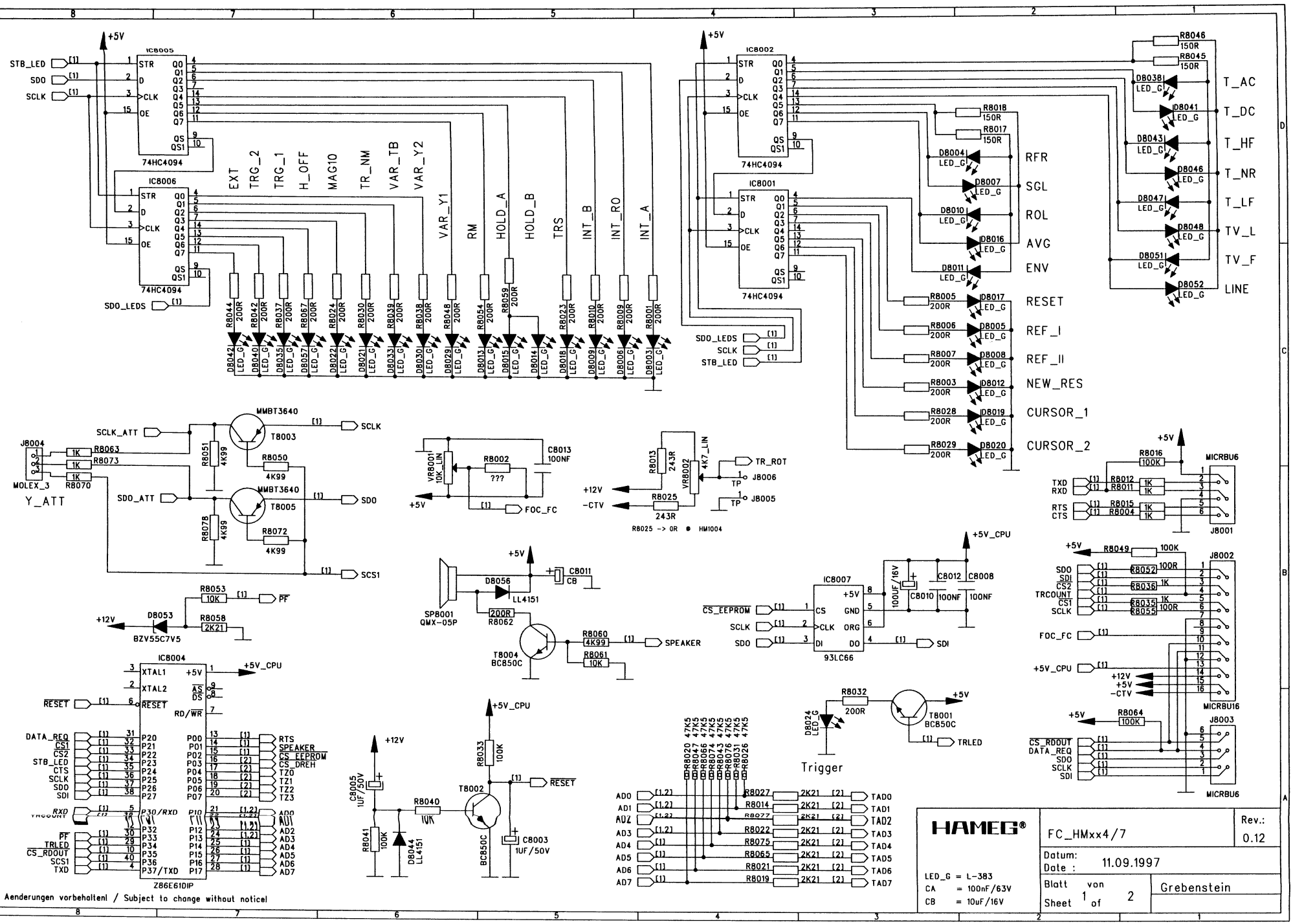


YF - Board Top and rear side

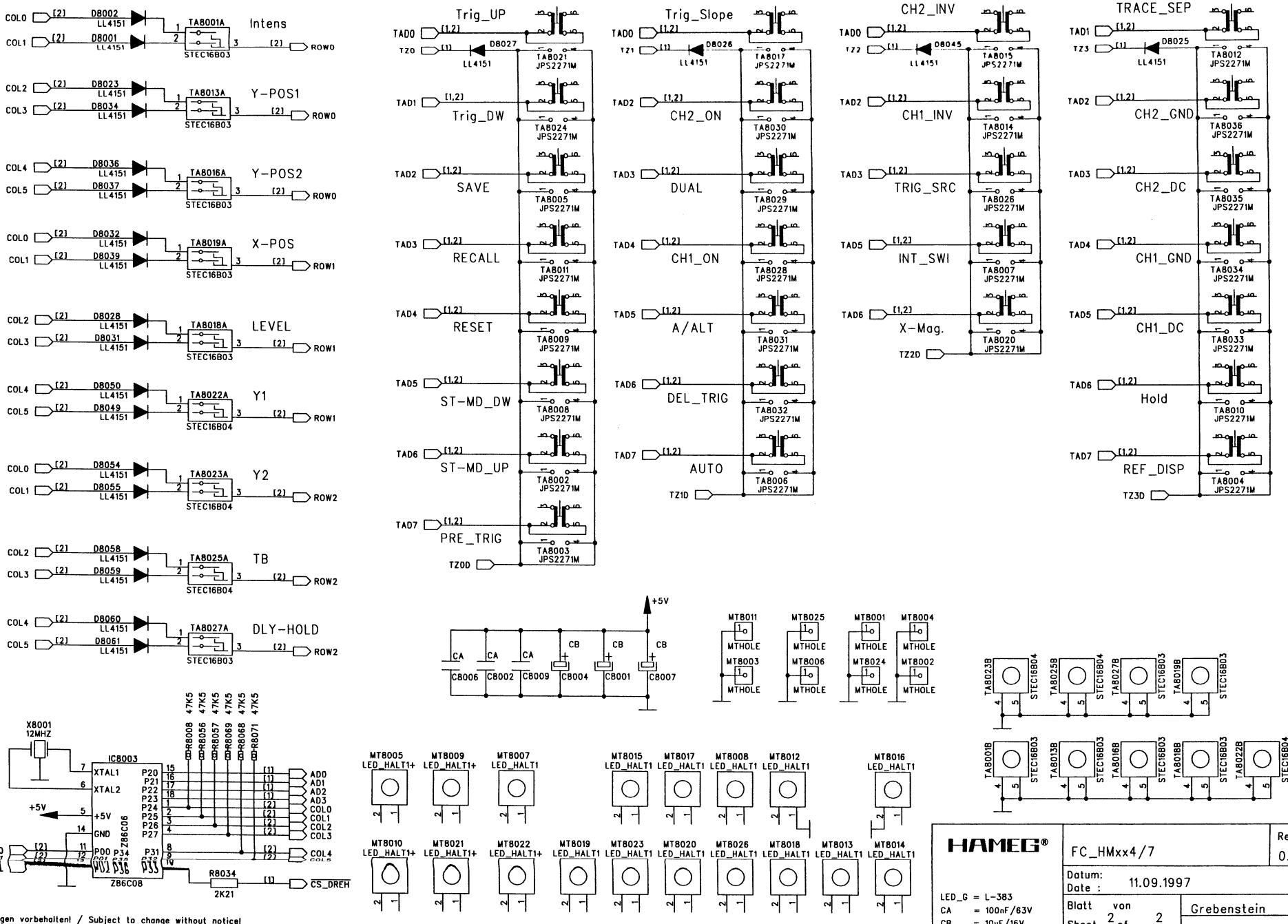




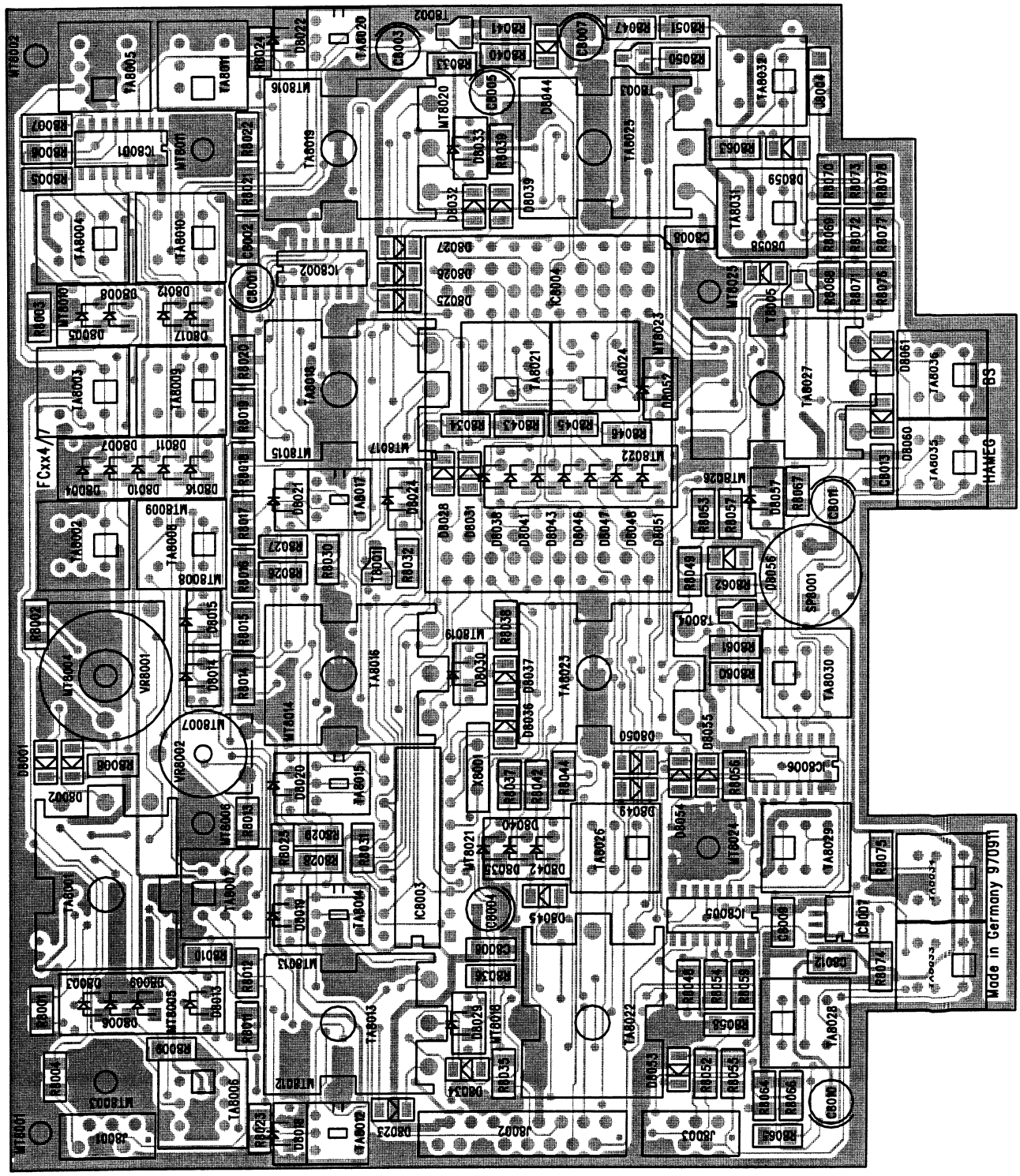
Subject to change without notice



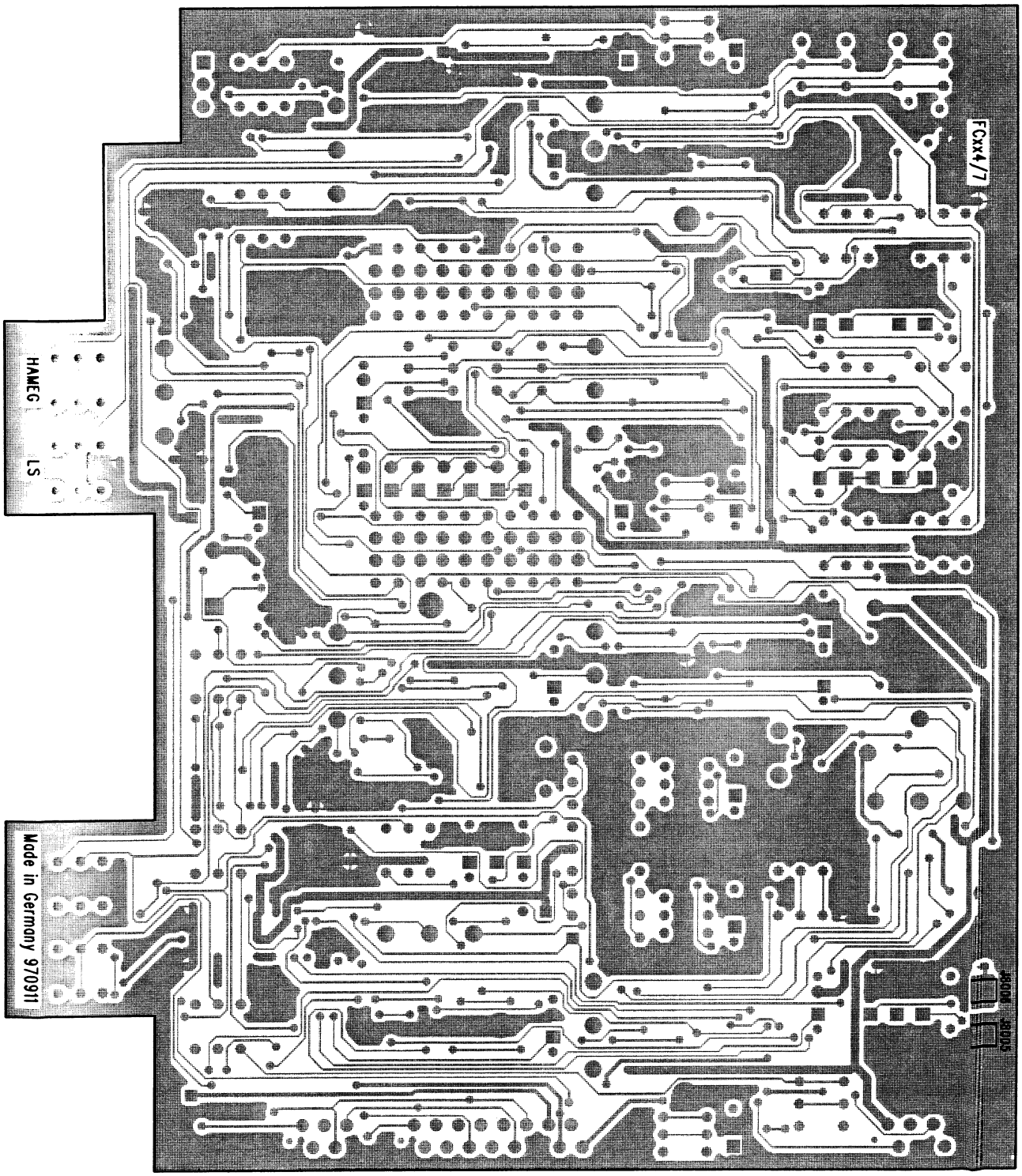
Subject to change without notice


COL0 D8002 LL4151
COL1 D8001 LL4151
TA8001A STEC16B03 Intens ROW0
COL2 D8023 LL4151
COL3 D8034 LL4151
TA8013A STEC16B03 Y-POS1 ROW0
COL4 D8036 LL4151
COL5 D8037 LL4151
TA8016A STEC16B03 Y-POS2 ROW0
COL0 D8032 LL4151
COL1 D8039 LL4151
TA8019A STEC16B03 X-POS ROW1
COL2 D8028 LL4151
COL3 D8031 LL4151
TA8018A STEC16B03 LEVEL ROW1
COL4 D8050 LL4151
COL5 D8049 LL4151
TA8022A STEC16B04 Y1 ROW1
COL0 D8054 LL4151
COL1 D8055 LL4151
TA8023A STEC16B04 Y2 ROW2
COL2 D8058 LL4151
COL3 D8059 LL4151
TA8025A STEC16B04 TB ROW2
COL4 D8060 LL4151
COL5 D8061 LL4151
TA8027A STEC16B03 DLY-HOLD ROW2
Trig_UP TAD0 D8027 TA8021 JPS2271M
Trig_DW TAD1 TA8024 JPS2271M
SAVE TAD2 TA8005 JPS2271M
RECALL TAD3 TA8011 JPS2271M
RESET TAD4 TA8009 JPS2271M
ST-MD_DW TAD5 TA8008 JPS2271M
ST-MD_UP TAD6 TA8002 JPS2271M
PRE_TRIG TAD7 TA8003 JPS2271M
Trig_Slope TAD0 D8026 TA8017 JPS2271M
CH2_ON TAD2 TA8030 JPS2271M
DUAL TAD3 TA8029 JPS2271M
CH1_ON TAD4 TA8028 JPS2271M
A/ALT TAD5 TA8031 JPS2271M
DEL_TRIG TAD6 TA8032 JPS2271M
AUTO TAD7 TA8006 JPS2271M
CH2_INV TAD0 D8045 TA8015 JPS2271M
CH1_INV TAD2 TA8014 JPS2271M
TRIG_SRC TAD3 TA8026 JPS2271M
INT_SWI TAD5 TA8007 JPS2271M
X-Mag. TAD6 TA8020 JPS2271M
TRACE_SEP TAD1 D8025 TA8012 JPS2271M
CH2_GND TAD2 TA8036 JPS2271M
CH2_DC TAD3 TA8035 JPS2271M
CH1_GND TAD4 TA8034 JPS2271M
CH1_DC TAD5 TA8033 JPS2271M
Hold TAD6 TA8010 JPS2271M
REF_DISP TAD7 TA8004 JPS2271M
+5V CA CB C8006 C8002 C8009 C8004 C8001 C8007
MTB011 MTB025 MTB001 MTB004 MTHOLE MTB003 MTB006 MTB024 MTB002
TA8023B TA8025B TA8027B TA8019B STEC16B04 STEC16B03
TA8018B TA8013B TA8016B TA8018B TA8022B STEC16B03 STEC16B04
X8001 12MHZ IC8003 ZB6C08 XTAL1 XTAL2 +5V GND P00 P31 P20 P21 P22 P23 P24 P25 P26 P27
R8008 R8056 R8057 R8069 R8068 R8071 47K5
AD0 AD1 AD2 AD3 COL0 COL1 COL2 COL3 COL4 CS_DREH
R8034 2K21
MT8005 MT8009 MT8007 MT8015 MT8017 MT8008 MT8012 MT8016 LED_HALT1+ LED_HALT1
MT8010 MT8021 MT8022 MT8019 MT8023 MT8020 MT8026 MT8018 MT8013 MT8014 LED_HALT1+ LED_HALT1
LED_G = L-383
CA = 100nF/63V
CB = 10uF/16V
HAMEG®
FC_HMxx4/7
Rev.: 0.12
Datum: Date : 11.09.1997
Blatt Sheet 2 von 2
Grebenstein
Aenderungen vorbehalten! / Subject to change without notice!

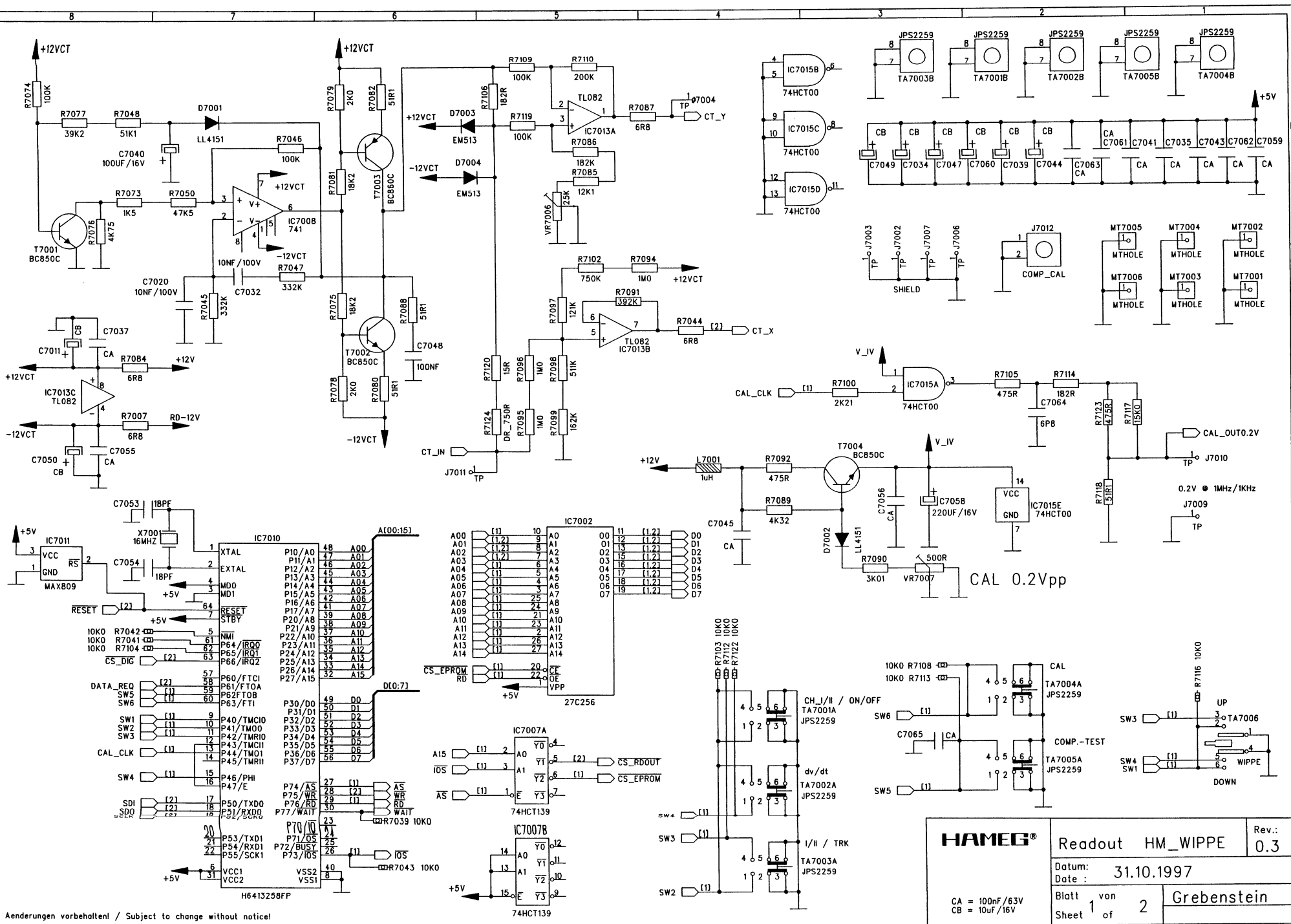
FC - Board Top side



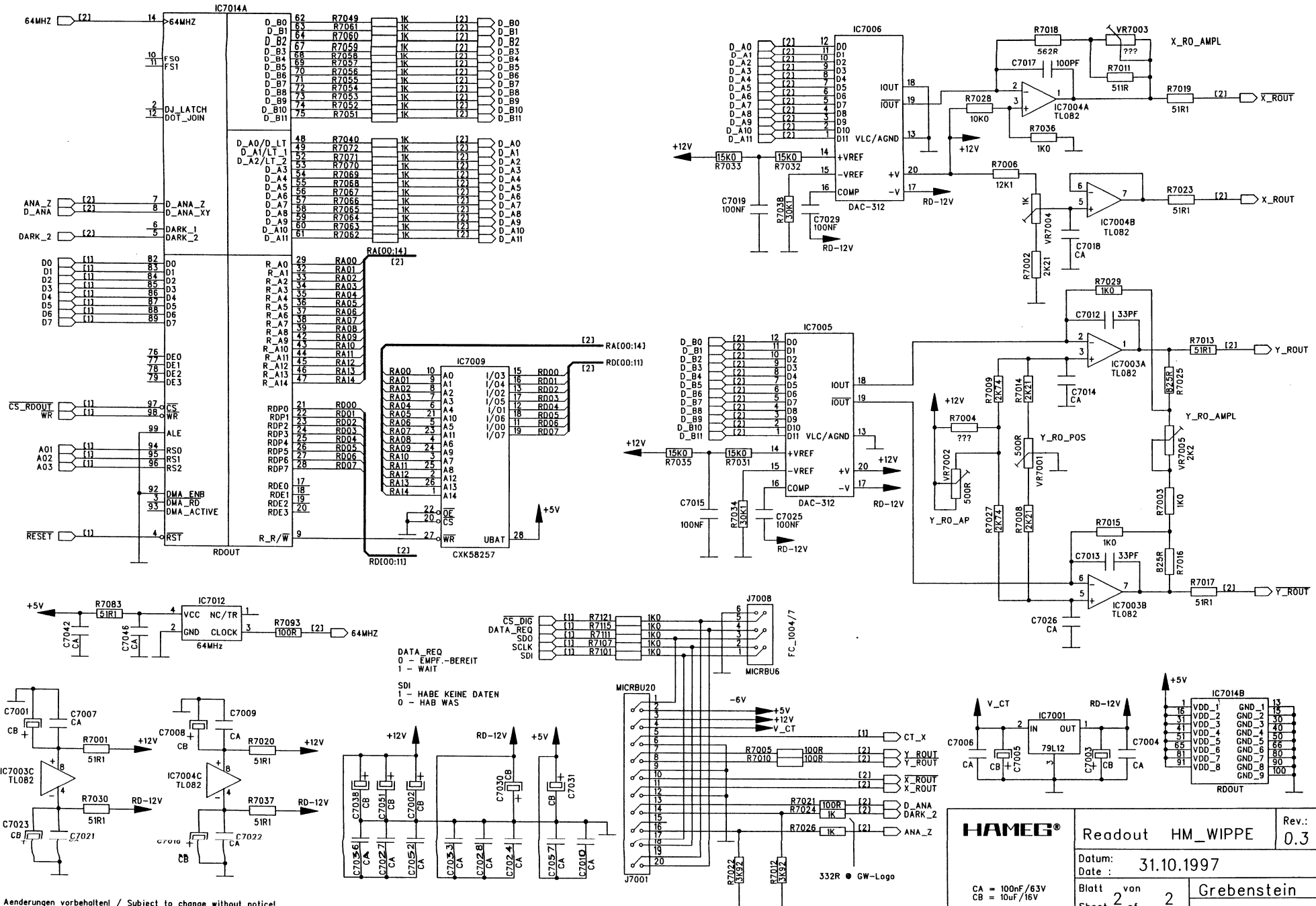
FC - Board Rear side



Subject to change without notice

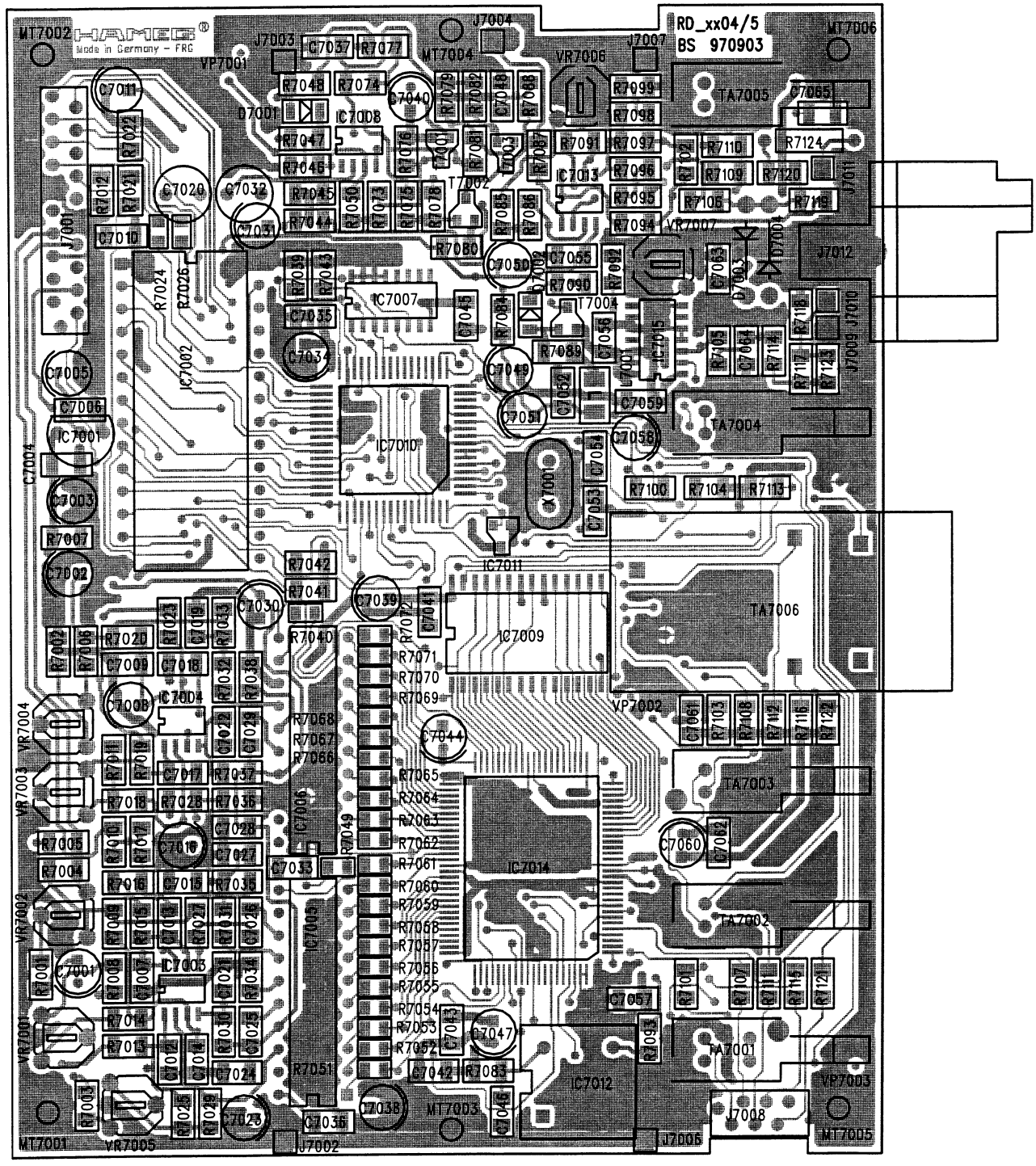


Readout - Board Diagram

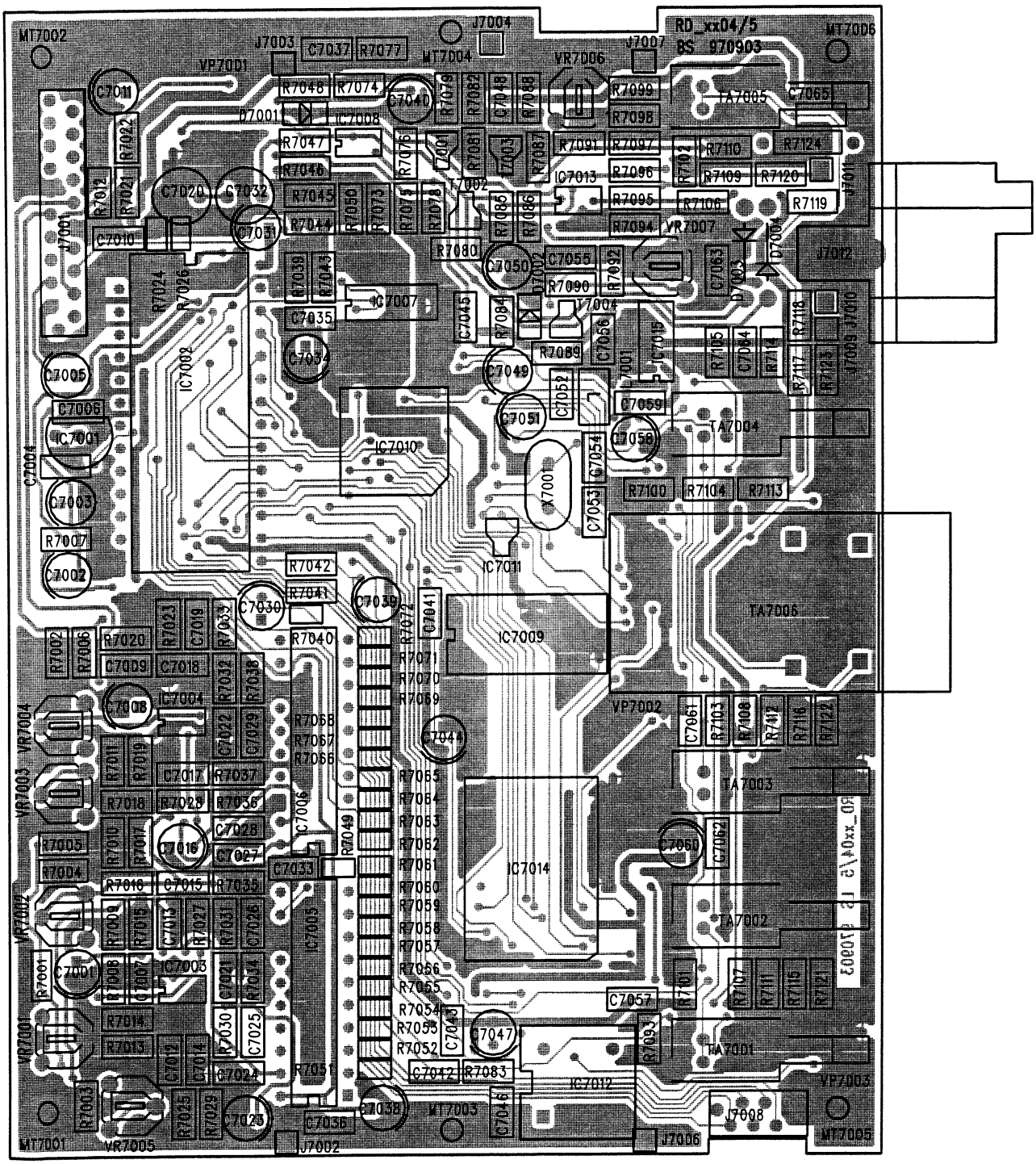


HAMEG®	Readout HM_WIPPE
	Rev.: 0.3
	Datum: Date : 31.10.1997
	Blatt Sheet 2 von of 2
	Grebenstein

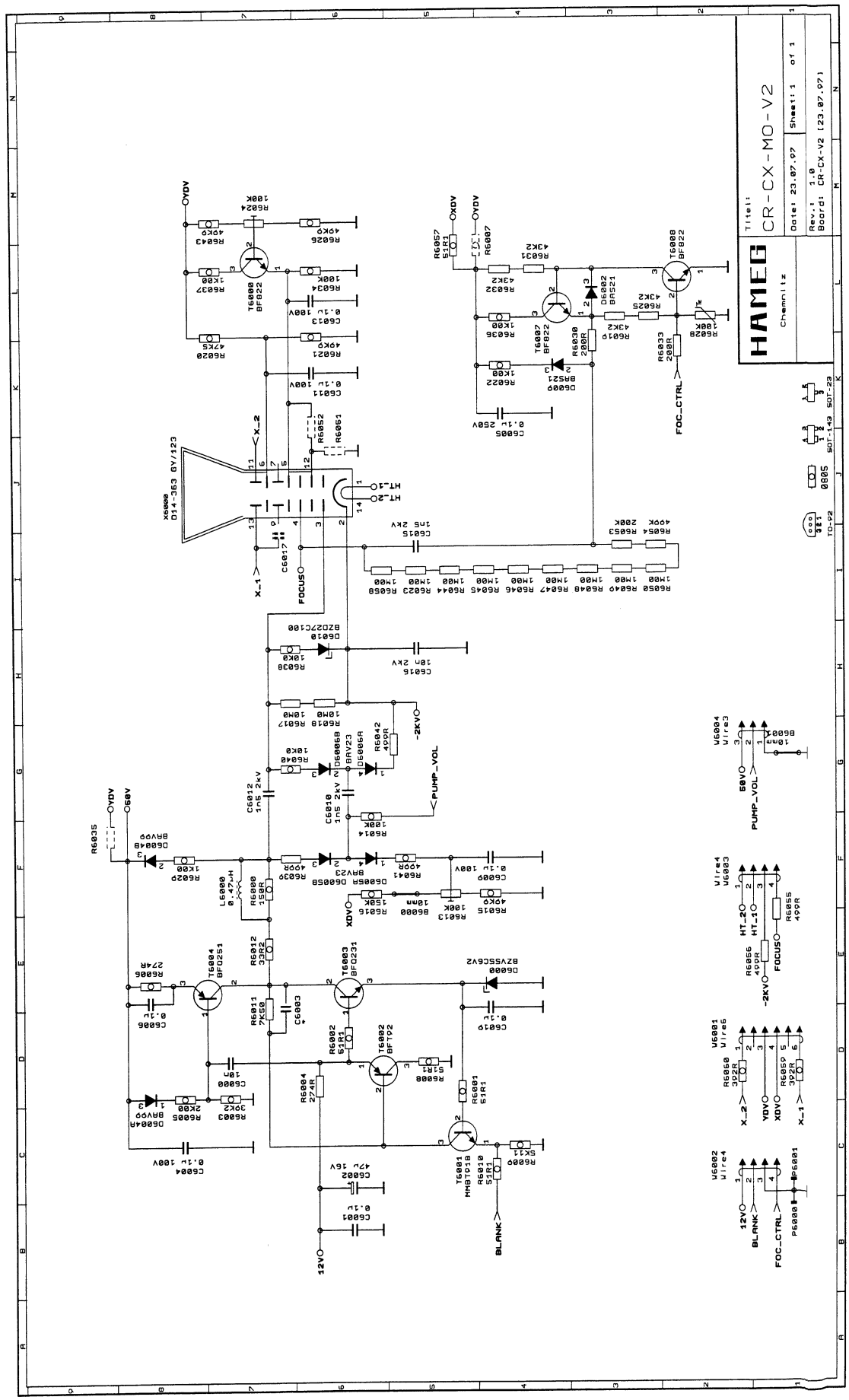
Subject to change without notice!


RD_xx04/5
BS 970903
Made in Germany - FRG

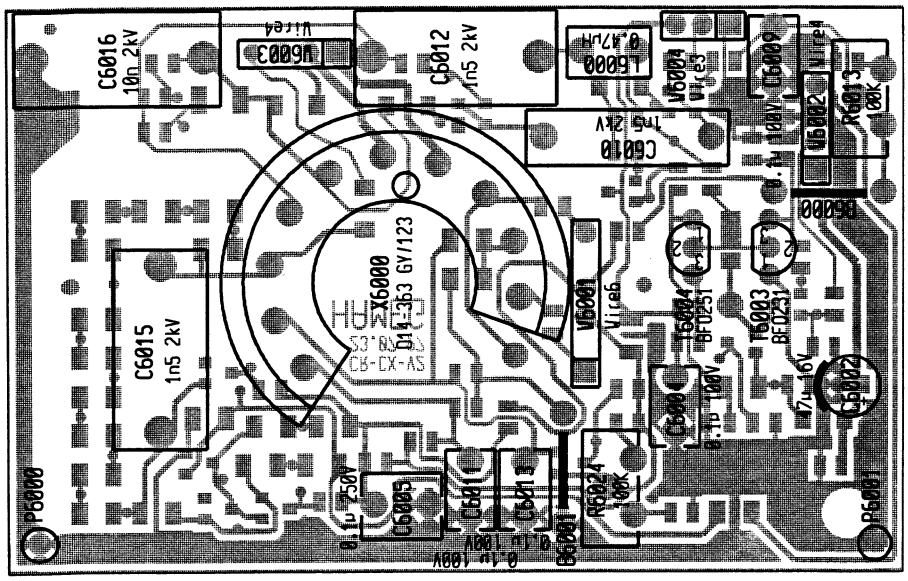
Readout - Board Rear side

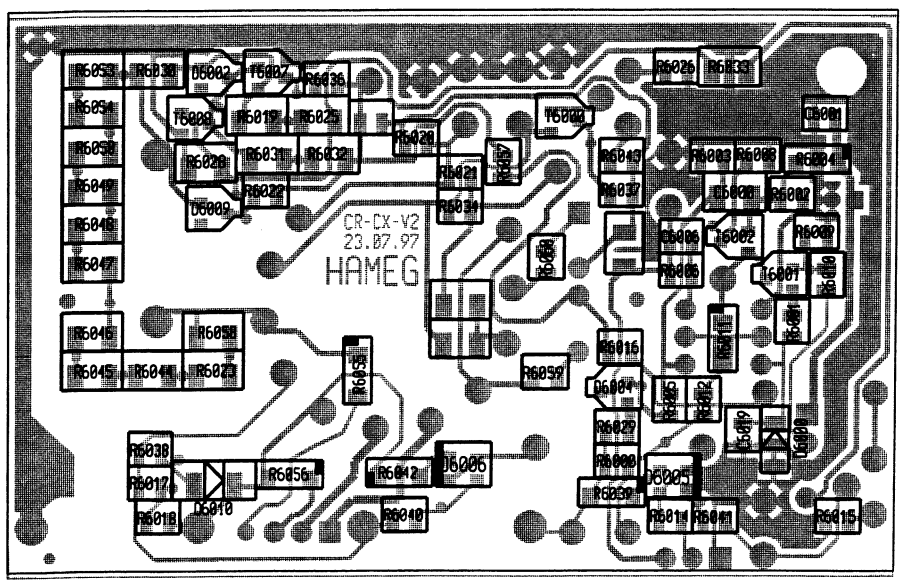


Subject to change without notice


HAMEG
Chemnitz
Titel: CR-CX-MO-V2
Date: 23.07.97
Sheet: 1 of 1
Rev.: 1.0
Board: CR-CX-V2 [23.07.97]
FOCUS
PUMP_VOL
FOC_CTRL
BLANK
12VO
-2KVO
OVDV
68V
XDVO
YDVO
X_1
X_2
HT_1O
HT_2O

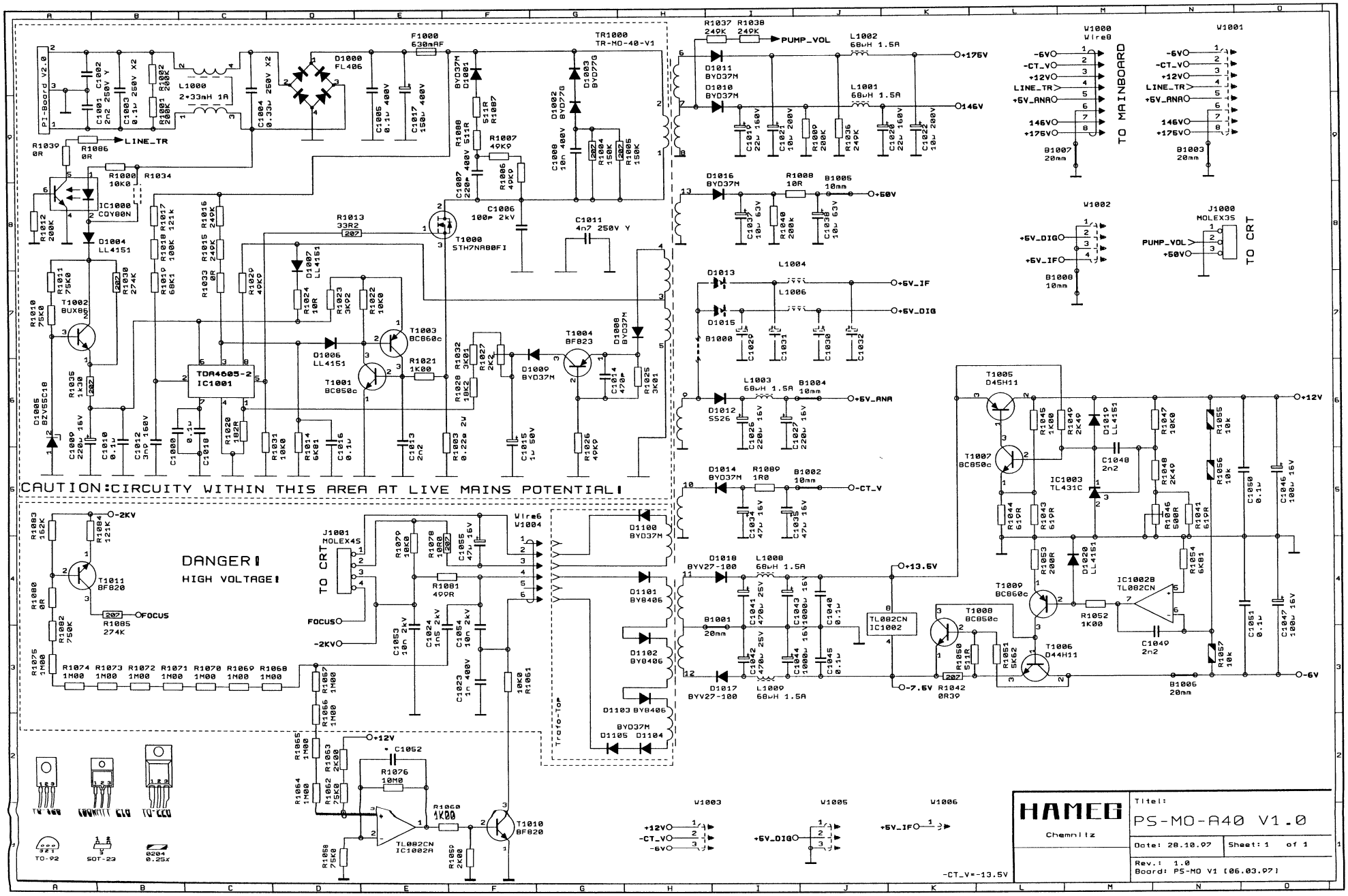
CRT - Board Top and rear side



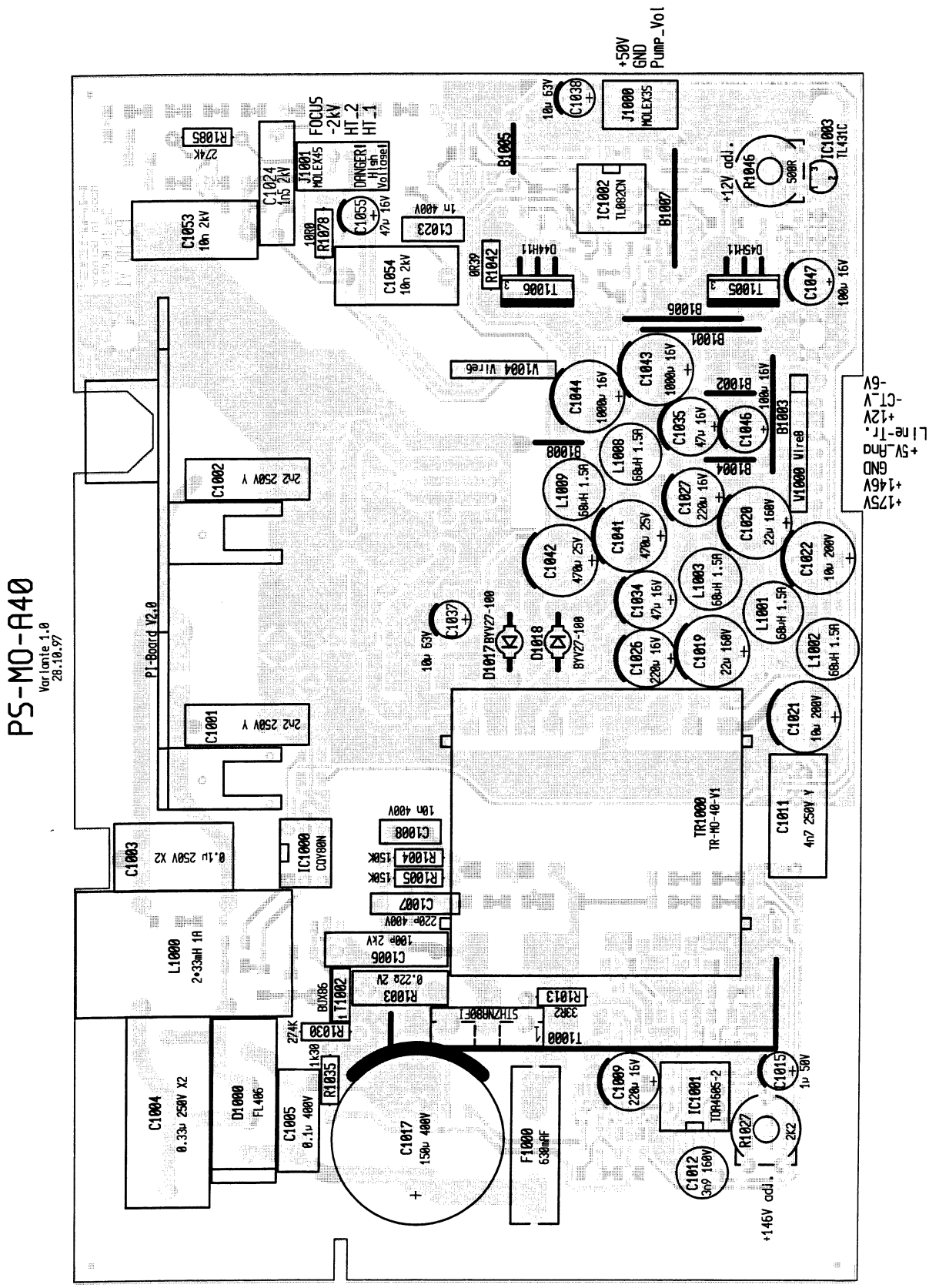


Subject to change without notice

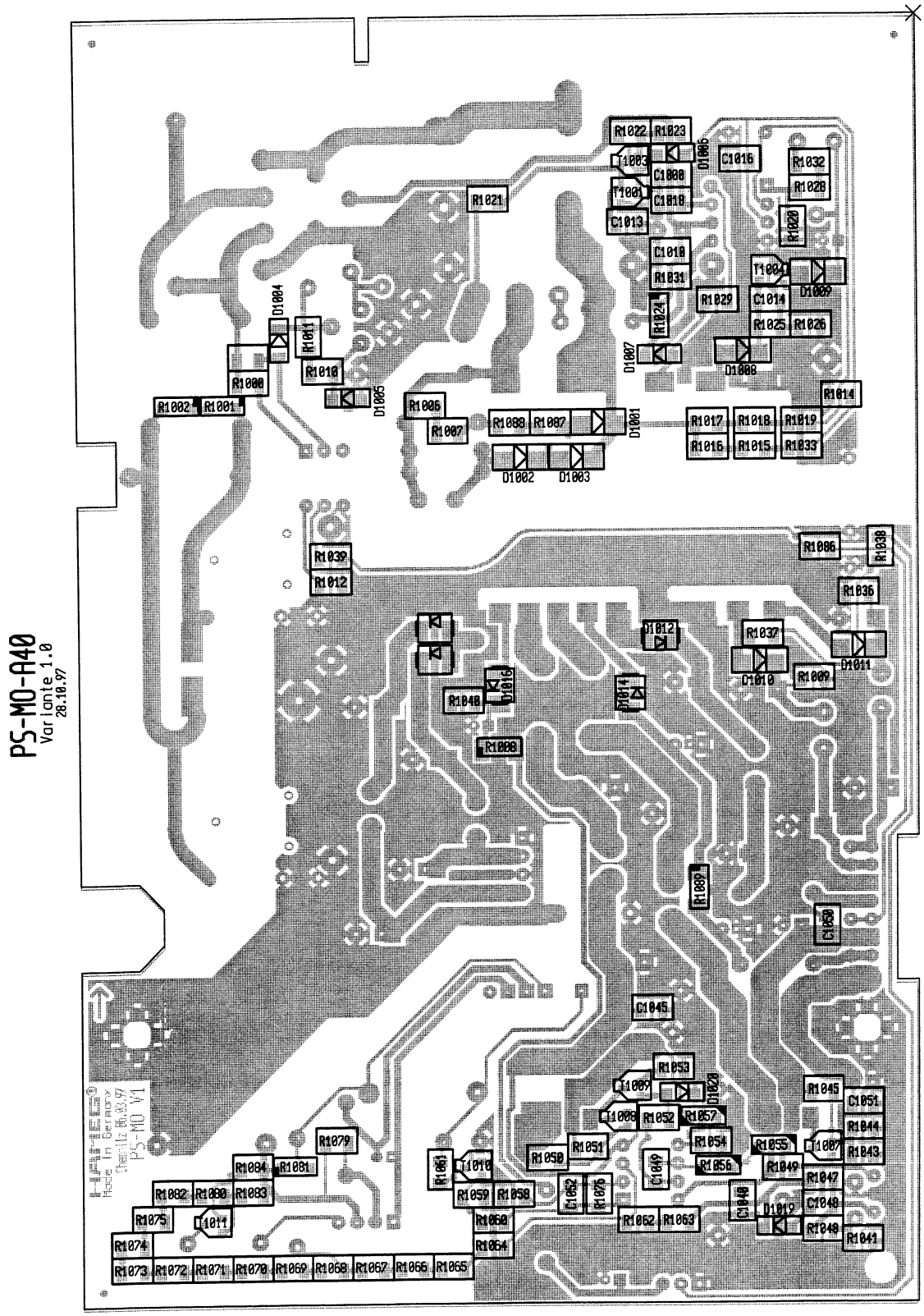
PS - Board Diagram



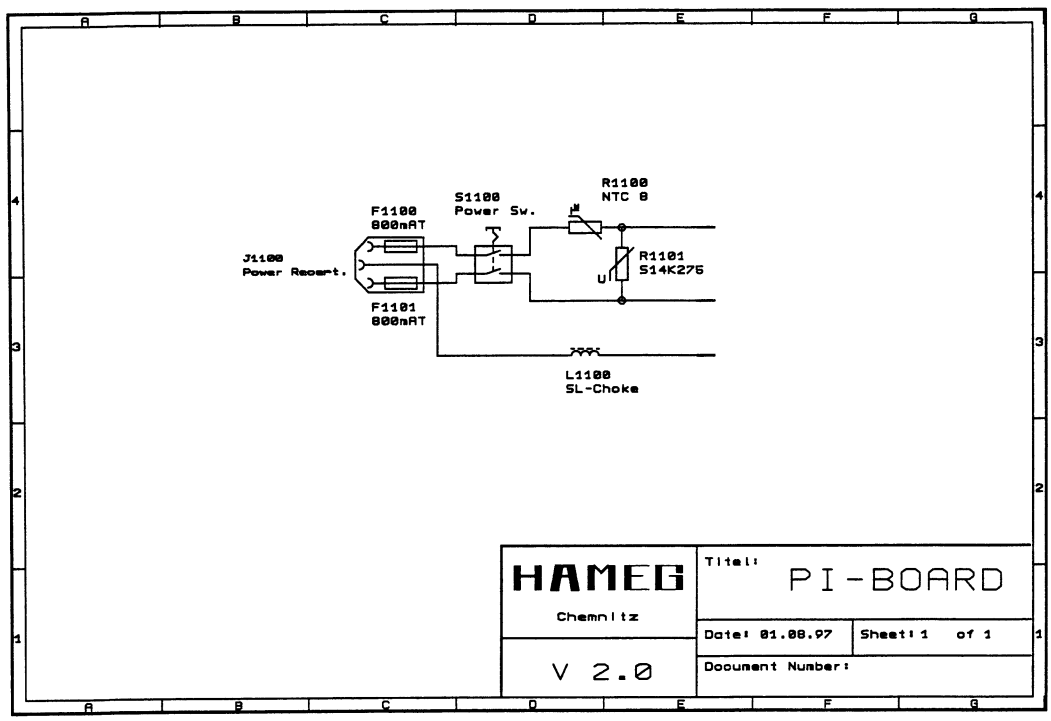
PS - Board Top side

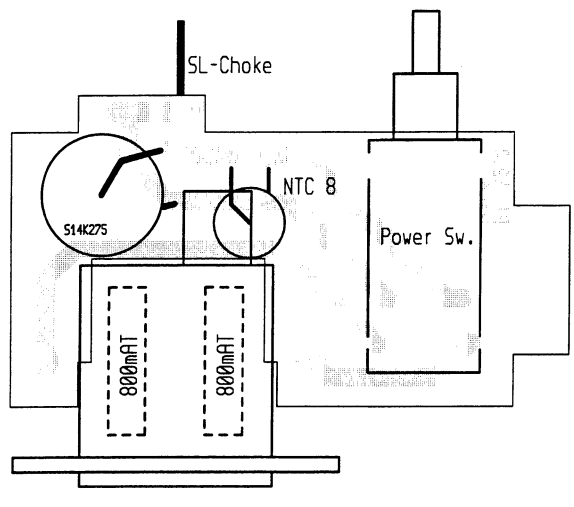


Subject to change without notice

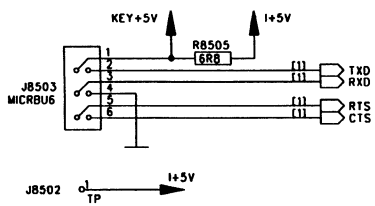

PS-MO-A40
Variante 1.0
28.10.97
PS-MO V1
Made in Germany

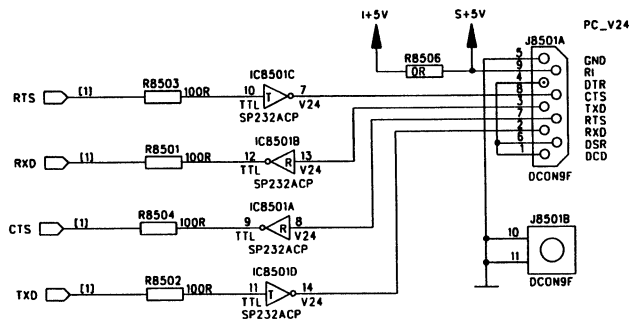
PI board - Diagram and Top side

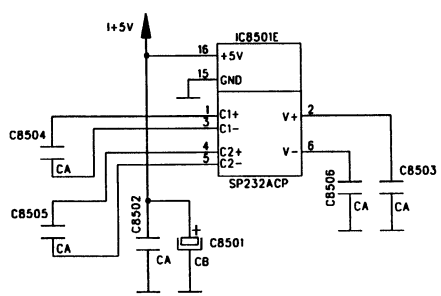




Subject to change without notice





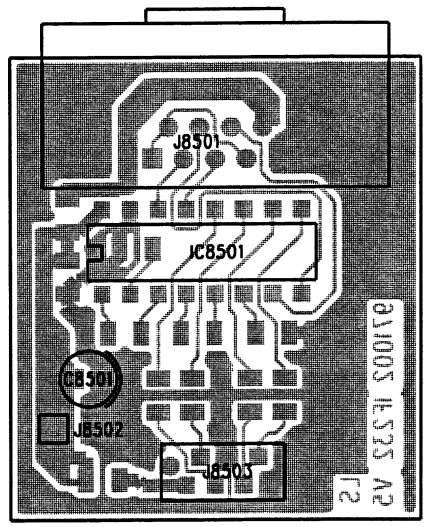


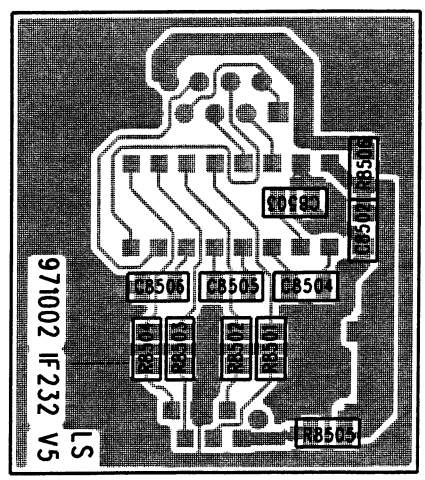
Aenderungen vorbehalten! / Subject to change without notice!

HAMEG®	RS232 - Adpater	Rev.: V5
	Datum: Date: 02.10.1997	
CA = 100nF/63V CB = 10uF/16V	Blatt 1 von 1 Sheet 1 of 1	Grebenstein

IF (RS 232) - Board Diagram

IF (RS 232) - Board Top and rear side





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